TECHNOLOGY DEPT.

NEW EQUIPMENT DIGEST

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June, 1955

Volume 20—Number 6

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Use Inquiry Slips—Pages 8 and 104

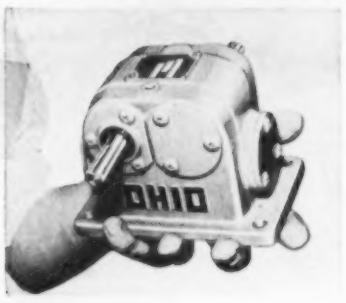
EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

CARTRIDGE HEATING UNIT
delivers intense concentrated heat

High watt densities and temperatures, plus long cartridge life are featured by this Firerod cartridge heating unit for use wherever concentrated heat must be applied. In tests, one Firerod unit operated in open air for periods up to 720 continuous hours at sheath temperature of 1800° F. It is available in standard, moistureproof and special types, in lengths from 1¼ to 12 in. and ⅜ or ½-in. diameters. Made by **Watlow Electric Mfg. Co.,** 1374 Ferguson Ave., St. Louis 14, Mo.

▲ For more details circle **NED-1 F5** on enclosed inquiry slip ▲

SPEED REDUCERS
horizontal double-reduction type



Ratios of 4:1 to 1600:1 are available in redesigned DOX horizontal double-reduction speed reducers, made with a zinc alloy housing. Offered at lower cost than present models, they have torque capacities of 25 to 150 lb-in. utilizing 1/6-hp. Standard units are furnished with roller bearings, but bronze sleeve bearings are available where applications permit. Made by **Ohio Gear Co.,** 1320 E. 179th St., Cleveland 10, O.

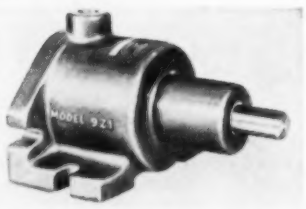
▲ For more details circle **NED-2 F5** on enclosed inquiry slip ▲

GERMICIDE & DEODORIZER
possesses mint fragrance

Developed for general disinfecting and deodorizing, Mintol germicide has a mint fragrance and can be used freely wherever bacterial menace or odors offend. It meets the Use Dilution Confirmatory Test on S. Cholerasuis in accordance with current Food and Drug Administration testing methods and has been given a coefficient of nine. Compound is diluted 1 to 100 parts of water for disinfecting or 1 to 200 for deodorizing. Made by **C. B. Dolge Co.,** Indian Hill Rd., Westport, Conn.

▲ For more details circle **NED-3 F5** on enclosed inquiry slip ▲

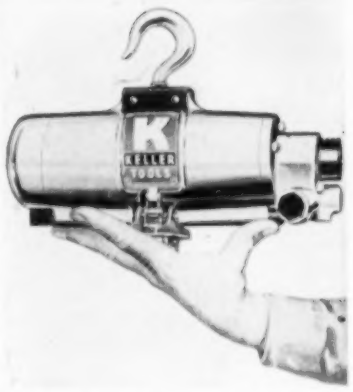
AIR CYLINDERS
with universal mounting



Quick, easy removal of 900 series clamp type air cylinders from jigs and fixtures is provided by their one-piece aluminum casting which has a flat base for either horizontal or vertical mounting. The universal mounting cylinders are available in 2-in. bore size, with 1 and 2-in. stroke lengths. Holes are slotted so that they can be installed, relocated or removed by loosening holddown bolts. Overall lengths with piston retracted are 4¾ and 5¾ in. Cylinders are spring-return type, normally retracted, and have a ½-in. diameter stainless steel piston rod. Made by **Modernair Corp.,** Dept. NED, 400 Preda St., San Leandro, Calif.

▲ For more details circle **NED-4 F5** on enclosed inquiry slip ▲

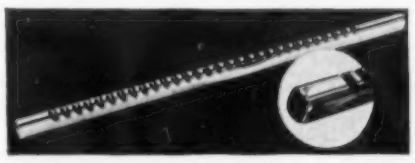
AIR HOISTS
in 150 to 2000-lb capacities



Additional speeds and capacities are available in expanded line of Keller air hoists. High-rate-of-lift models with capacities of 500 and 1000 lb have a lifting rate of 35 fpm. Link chain models can handle 1000 or 2000 lb at 19 fpm. The 28-lb, 1000-lb capacity hoist can be handled by one man. Smaller loads can be handled by the 300-lb capacity unit at 80 fpm and by a 150-lb capacity unit for items that are too heavy to lift by hand. Latter unit features one-hand control. Made by **Gardner-Denver Co.,** Keller Tool Div., Dept. N, Grand Haven, Mich.

▲ For more details circle **NED-5 F5** on enclosed inquiry slip ▲

PUSH-TYPE BROACHES
production type for keyways



Minute Man production type high speed steel broaches are available from stock for ⅛, 3/16 and ¼-in. keyway widths with body diameters from ½ to 1 in. by 1/16-in. increments. They are used with hydraulic or hand-operated arbor presses. Back of the broach is ground to fit the radius of the bore in which it will cut, so the body supports itself in the hole without need for guide or bushing. They are offered in lengths from 11⅞ to 17¾ in., all with ¾-in. minimum length of cut and maximum lengths of cut from 1½ to 2 in. Made by **du Mont Corp.,** 38 Beacon St., Greenfield, Mass.

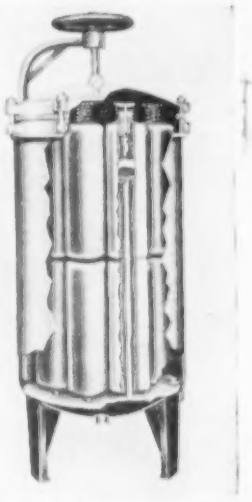
▲ For more details circle **NED-6 F5** on enclosed inquiry slip ▲

SMALL CLUTCH ASSEMBLIES
for modernizing existing equipment

Small clutch assemblies for machines with 1 to 31 hp requirements are now available in packaged units for on-the-job modernization of existing equipment. Units feature 360-degree engagement, uniform friction pressure, instant response to electro-pneumatic controls, automatic compensation for wear and complete disengagement. They adapt to cyclic or continuous operations and can be controlled locally or remotely. Photo shows spider bearing mounted unit which features extended drum hub mounted on antifriction bearings. Spider gap mounted unit for installation direct to mating component and spider close mounted unit for flexible coupling service are also offered. All provide overload protection. Made by **Fawick Corp.,** Fawick Airflex Div., Dept. A, 9919 Clinton Rd., Cleveland 11, O.

▲ For more details circle **NED-7 F5** on enclosed inquiry slip ▲

MULTI-CARTRIDGE OIL FILTERS
ten sizes use 1 to 24 cartridges



Flexibility of these multi-cartridge oil filters lies in the fact that six different types of cartridge refills can be used interchangeably. Each is designed for a special filtering job. Filters can be used for engine lube and fuel oils, hydraulic oils, coolants and air filter oils. They are available in ten sizes using 1 to 24 cartridges and are suitable for individual machines, central systems or batch filtration. Choice of electric, steam or hot water heat is offered. Covers, fastened by swing bolts which loosen quickly, are sealed to filter tank by neoprene gaskets. Cartridges are sealed by means of removable pressure plate. Made by **Houdaille-Hershey of Indiana, Inc.,** Filtration Div., 70 South Ave., Lebanon, Ind.

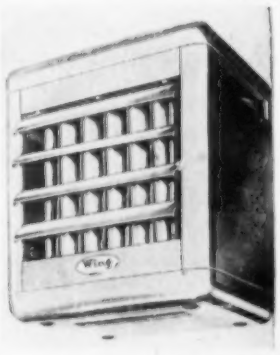
▲ For more details circle **NED-8 F5** on enclosed inquiry slip ▲

COUPLERS & CONNECTORS
for air lines, pneumatic equipment

High air volume and low pressure drop are features of Hi-Lo Speed couplers and connectors for air lines. Couplers, linked to compressed air source with hose or tubing, remain airtight under high pressure. Connectors are attached to air-operated equipment. Plug-in action snaps coupler and connector together to withstand strong pull on hose, yet they can be instantly snapped apart. Swivelling action prevents hose kinking. Three series are available for ¼, ⅜ and ½-in. hose with various thread sizes and hose inserts. All units are cadmium plated steel with stainless steel valve. Equivalent sizes in brass, stainless steel and aluminum will be available soon. Made by **Aro Equipment Corp.,** Erie St., Bryan, O.

▲ For more details circle **NED-9 F5** on enclosed inquiry slip ▲

UNIT HEATERS
gas fired, horizontal discharge type



Combustion chamber and heat exchangers in line of gas-fired utility unit heaters are 16-gage aluminized steel and welded into a one-piece assembly. A draft diverter is built in. Four-bladed aluminum propeller type fans provide horizontal discharge of heated air with low noise level. Heavy wall cast iron burners have drilled ports. Heaters incorporate automatic safety controls and range in size from 50,000 to 230,000 Btu per hour input. Line includes two unit heat designs and a duct type heater. Made by **L. J. Wing Mfg. Co.,** 165 Vreeland Mills Rd., Linden, N. J.

▲ For more details circle **NED-10 F5** on enclosed inquiry slip ▲

with PLASTIC ROCK!

Trowel a smooth, tough, malleable surfacing right over your old concrete or wood floor.

Plastic Rock comes complete, packed in barrels; nothing more to buy; no "formula" to confuse. Simply mix and trowel over old floor; adheres to concrete, wood, steel; average depth ½"; perfect feather edge; hundreds of tons rolling on steel wheels only improve it. Spark-proof, skid-resistant wet or dry; dustless, noiseless; cannot splinter, crumble, curl or loosen. Used by largest industries, institutions and railroads.

ASK FOR REPORT 220-N-6.

UNITED LABORATORIES, INC.
16804 Euclid Avenue, Cleveland 12, Ohio
FLOORING • ROOFING • SPECIAL PAINTS
Field Representatives Coast to Coast

▲ For more details circle **NED-11**

INTERLOCKING INFRA-RED SECTIONS

For any application: heating, baking, dehydrating, curing, etc. Completely wired, ready to install by your own personnel, or constructed by us to your specifications. LOW INITIAL COST . . quickly pays for itself in increased production, improved products. Gives even field of infra-red energy in wave length absorbed most efficiently, more effectively by any color or material.

NO BULBS OR SOCKETS TO BURN OUT

Lowest maintenance cost, because the ceramic generators are immune to vibration, moisture, shock and rough handling. Nothing to shatter and contaminate products.

Write today for descriptive folder

driQuik DIVISION
DRY CLIME LAMP CORP. Greensburg, Ind.

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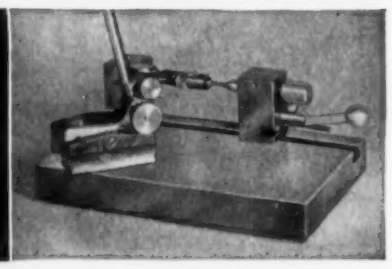
New Precision Bench Center



...FOR SMALL OR MINIATURE PARTS

Here is the only precision bench center especially designed for small parts inspection. First built by Transicoil for inspecting miniature servo components manufactured by the company . . . now available to others with similar needs.

The YBC-1 bench center wastes no valuable bench space, yet there's plenty of room for equipment set-ups on the ground base. Novel design permits adjustment of the live center post with one hand. And the unit can easily be carried to the work.

SPECIFICATIONS: *Weight:* 16½ lbs. *Size:* 9"x 5⅞"x3¼". *Max. dist. between centers:* 5⅜". *Max. diam. for measurements:* 3¼". *Parallelism of center-line to base and sides:* within 0.0005".

GET COMPLETE STORY NOW! *Write for Bulletin YBC-1.*

Worcester, Montgomery Co. Pennsylvania
TRANSICOIL CORPORATION

▲ For more details circle **NED-13 F5** on enclosed inquiry slip

MARKING PENCIL
writes on all surfaces

Black, red, blue, green, yellow and white are lead colors available in the Tweeten mechanical marking pencil. It has a 5½-in. heavy duty plastic barrel, available in four colors, with pocket clip. A black screw turn top propels the 3½-in. long refill. Pencil will mark on any wet, dry or frozen surface, regardless of whether it is glossy, soft, rough or painted. Made by **Tweeten Fibre Co.**, Dept. 301, 2031 Fulton St., Chicago 12, Ill.

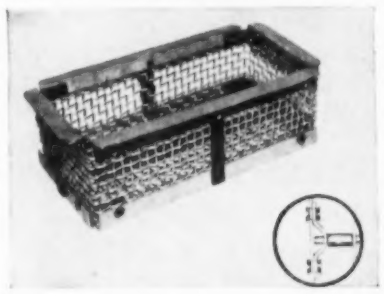
▲ For more details circle **NED-14 F5** on enclosed inquiry slip ▲

INDUSTRIAL WARNING LIGHT
has rotating parabolic mirror

In combination with a horn or siren, this Hi-Ball light is an effective industrial warning signal. It can be mounted anywhere an emergency might arise. Silvered parabolic reflector revolves around a 1000-hr life bulb to give a powerful, flashing light. Unit operates on 120-v ac. Heavy plastic dome can be supplied in red, blue, green, amber or clear. Made by **Trippe Mfg. Co.**, 218-A N. Jefferson St., Chicago 6, Ill.

▲ For more details circle **NED-15 F5** on enclosed inquiry slip ▲

HEAT TREATING FIXTURES
design permits thermal expansion



Specific allowances for thermal expansion and contraction in Interlock design heat treating fixtures provide free movement of all joints during heating and cooling. The nonbinding joints employ tubular rivets and loosely-fitting spacer sleeves in the trays, baskets, crates and other fixtures for annealing, carburizing, carbonitriding and other bulk heat treating operations. Design also permits a decrease in basket-load weight ratio. Scaling and corrosion problems can be overcome by fabricating the Interlock fixture from metal or alloy most resistant to the particular process conditions. Data available from manufacturer, **Cambridge Wire Cloth Co.**, Dept. C, Cambridge, Md.

▲ For more details circle **NED-16 F5** on enclosed inquiry slip ▲

NEED LOCK WASHERS?

There's an American Spring Lock Washer and Flat Washer for Every Requirement—Galvanized, Cadmium, Zinc, Parkerized and Other Finishes.

Shown are Antilink, Kantlink, Antilink Positive, Highcollar, Rib, Double Coil and HiTesT Lock Washers which are available from stock in a complete range of sizes.

We can also supply your needs in Quality FLAT WASHERS of brass, steel, copper, stainless, aluminum, Monel or lead. They're clean, concentric, flat and burr-free!

We are prepared to meet your specifications for small PRECISION STAMPINGS. You'll be amazed at the speed and low cost. Any required finish can be supplied.

AMERICAN QUALITY IMPROVES YOUR PRODUCT!
Half Century of Uninterrupted Service.

Write for complete information and literature.

AMERICAN NUT & BOLT FASTENER CO.
Doerr Street, Pittsburgh 33, Pa.

▲ For more details circle **NED-17 F5** on enclosed inquiry slip ▲

Bring Down Your Cost of Counting and Filling Screws and Nails with VIBRACOUNT

Drop your cost for labor, per thousand plastic capsules or envelopes of screws and nails, with Brown Bag's Vibracount Machine. Relay automatically controls flow. Filling and counting speed equal to fastest operator. Pressure on discharge tunnel releases precounted items. Vibracount, 24" x 14" x 14", mounts conveniently on bench or table. Write for full details.

West Coast Rep.: Peter D. Bowley & Assoc., 210 Mississippi St., San Francisco, California

BROWN BAG FILLING MACHINE CO., INC.
FITCHBURG, MASSACHUSETTS

▲ For more details circle **NED-18 F5** on enclosed inquiry slip ▲

BROWNING Poly-V* Drive

Increases capacity in 1/3 less space!

In this 100 hp compressor drive, one Browning Poly-V 20-groove "M" drive 8" wide replaces multi-V drive of 8 "D" belts 12" wide. Ups capacity 12% in ⅓ less space. Permits shorter shaft, reduces bearing pressure. Costs less, too.

This is but one example of the many Browning Poly-V installations that save space and increase capacity, efficiency and service life. Unique new Poly-V consists of parallel V-belts molded as one unit, on matching sheaves. Eliminates belt matching problem. Utilizes Browning's famous interchangeable split taper bushing. Browning Poly-V can do a job for *you*, too. Learn how. Write for free catalog PV-200.

*Ⓡ Raybestos-Manhattan, Inc.

Browning MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY

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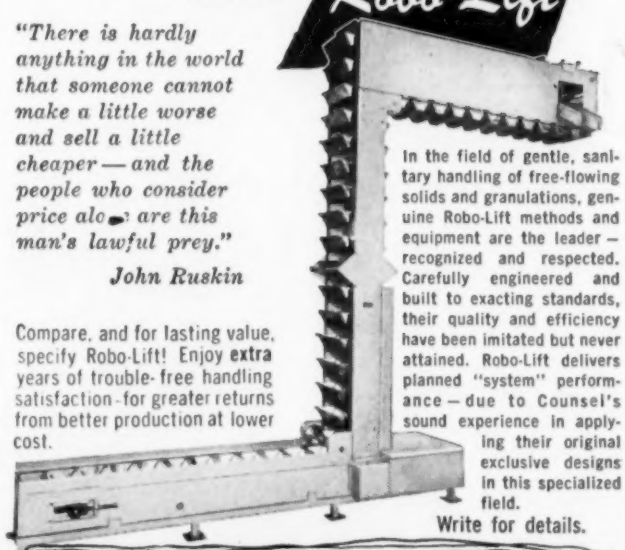
specify complete handling satisfaction..

...specify **Robo-Lift**

"There is hardly anything in the world that someone cannot make a little worse and sell a little cheaper — and the people who consider price alone are this man's lawful prey."
John Ruskin



Compare, and for lasting value, specify Robo-Lift! Enjoy **extra** years of trouble-free handling satisfaction - for greater returns from better production at lower cost.

In the field of gentle, sanitary handling of free-flowing solids and granulations, genuine Robo-Lift methods and equipment are the leader — recognized and respected. Carefully engineered and built to exacting standards, their quality and efficiency have been imitated but never attained. Robo-Lift delivers planned "system" performance — due to Counsel's sound experience in applying their original exclusive designs in this specialized field.

Write for details.

COUNSEL MACHINE COMPANY, INC.
8 Hathaway Street • Wallington, N. J.

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For a
FLAWLESS FINISH...

on stainless steel, use "Steelhue." Compounded of finest iron-free aluminum oxide in pure animal fat binder to produce mirror finish on cutlery, tools and all top-grade products of stainless steel.
There's a Russell H. Burns polishing or buffing compound for every finishing problem. Write for data sheet.

RUSSELL H. BURNS COMPOUND COMPANY
Successor to E. Reed Burns Mfg. Co.
810 Lincoln Blvd. ELliott 6-1838
Middlesex, New Jersey

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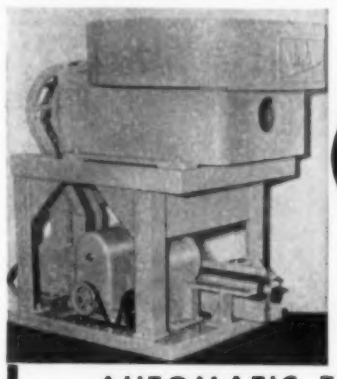


Another KDI Engineered Application

AUTOMATIC THRU-FEEDER FOR CENTERLESS GRINDING

The Kraus Automatic Thru-Feeder is another outstanding example of trained engineering experience applied successfully to an expensive parts handling problem.

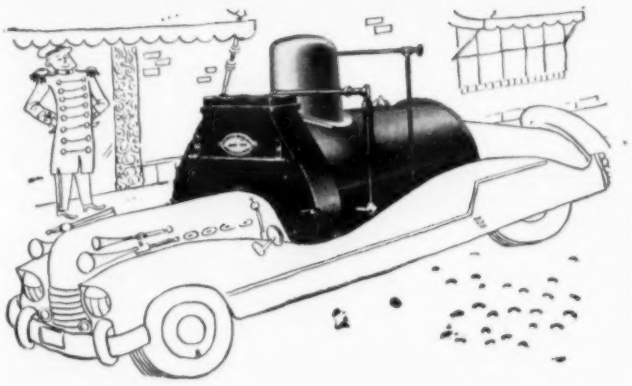
Developed primarily for handling bearing races and similar parts requiring a high degree of accuracy, the Thru-Feeder can speed many other precision grinding applications. Chain feed conveyors are also available.

Two versatile models are available both adjustable - the F-4 to handle parts 3/8" to 1-9/16" and the F-7 for parts 1-1/4" to 3-3/4" diam.

Write for information on your parts handling problems.

kdi kraus design, inc.
964 EXCHANGE ST., ROCHESTER 8, NEW YORK

▲ For more details circle NED-22 F5 on enclosed inquiry slip ▲



A Boiler Is Not an Automobile

Styling, gadgets and gimmicks may help sell automobiles. But a boiler is a long term investment; reliable performance, low operating costs and long life are the vital considerations. That's why we're sure that if you carefully examine *all* the facts you'll choose a Leffel Scotch-Type Boiler. We'd like to show you the records on many Leffel boilers which have been operating for 30 years or more with only a few dollars spent on maintenance items. Drop us a line today; we'll give you the complete story. Fast.

THE JAMES LEFFEL & CO. Dept. N Springfield Ohio

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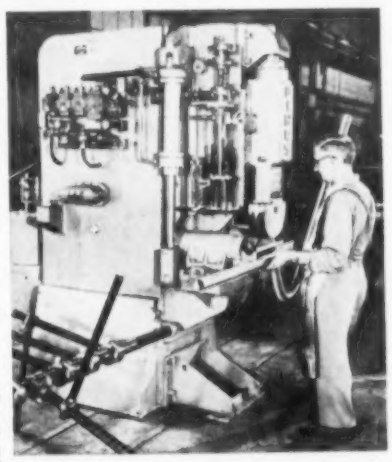
Never-Ending Change

NEW EQUIPMENT DIGEST is mailed only to the right man in the right plant. Evidence of the care with which John Close, our Circulation Manager, guides each copy into the hands of top men in production, engineering, maintenance and purchasing functions in well-established plants is clearly shown in our Circulation Statement. This report, verified by the Business Publications Audit of Circulation, shows that 15,517 new names were added to our mailing list during 1954. During this same period, 15,404 names were removed because men had changed jobs, retired or died. Were it not for this constant checking, our circulation list of over 70,000 leaders of industry would be obsolete in a little over four years.

If your copy is not addressed properly, if others in your plant should be receiving NED regularly, or if you know of a buying or specifying official of a recognized manufacturing company who would like to receive this magazine, please let us know. Just fill out the self-mailing Inquiry Slip on page 8 or 104 of this issue.

A. N. Gregg
EDITOR

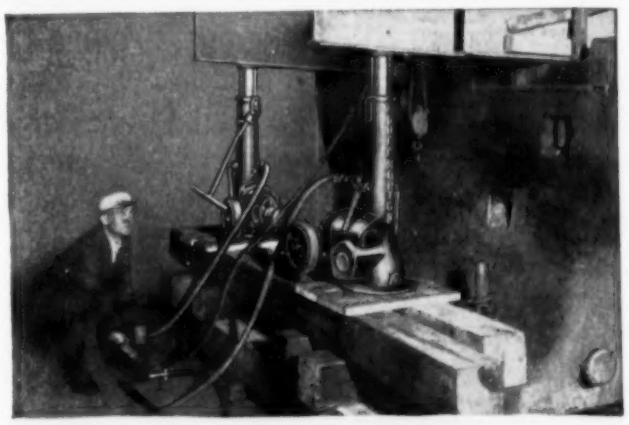
PIPE BENDING PRESS
improved machine can make up to 1400 distortion-free bends per hour



This improved pipe and tube bending press makes possible production of up to 1400 bends per hour without excessive flattening or distortion. The fully hydraulic, self-contained unit has the power for repeat bending of ½ through 2-in. OD steel tubing with maximum wall thickness of 0.083-in. Clearance is provided to bend a 2 in. tube with 5-in. centerline radius to 180 degrees.

New features include one-piece C-frame casting for extra strength and rigidity; cast steel ram and built-in ram cylinder; an accurate angle-of-bend control; improved wing die operation; new manifold-type valves which eliminate 90 per cent of piping formerly used; and adjustment added to limit return stroke of ram for shallow bend operations. Made by **Pines Engineering Co.**, 601 Walnut St., Aurora, Ill.

▲ For more details circle NED-24 F5 on enclosed inquiry slip ▲



How You Can Lift 200 Tons With Air Power Jacks

Connect two Duff-Norton 100-ton capacity air motor power screw jacks (shown above) to a Y-valve connection on the same air system you use for other pneumatic tools, press the double valves with your fingers and the load is lifted. No manual effort required. Safe, dependable—made in 20, 35, 50, 75-100 ton models. Other uses: pushing pipe, repairing heavy construction equipment, industrial forming work. Send for Bulletin AD-11-N. **Duff-Norton Company, P.O. Box 1889, Pittsburgh 30, Pa.**

DUFF-NORTON JACKS
"Giving Industry a Lift Since 1883"

▲ For more details circle NED-25 F5 on enclosed inquiry slip ▲

Bulletin 100 contains complete details on Automation Products' precision-built hydraulic cylinders for pressures up to 2000 p.s.i., mounting dimensions and important engineering information. Write today for your copy of this convenient bulletin.

AUTOMATION PRODUCTS FOR INDUSTRY
AIR & HYDRAULIC POWER COMPONENTS

Automation Products Division
BILL-DEE CORP.
Automation Air & Hydraulic Cylinders
411 CRYSTAL LAKE ROAD • McHENRY, ILLINOIS

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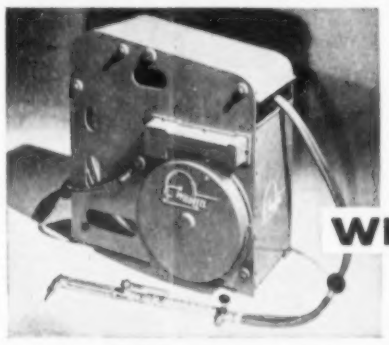

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Welding Hose Reel

Makes hose last 3 to 5 times longer
Provides safer, cleaner working area
Locks hose at any desired length
Retracts hose when not in use
Requires only small space for mounting on stationary or portable equipment
Model OA handles 50 feet dual hose
Model OAB handles 150 feet dual hose
Write for complete information and the name of your Weldreel dealer

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P. O. BOX 698
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WELDREEL

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WEN

LOW COST

Pocket Portable

POWER TOOLS

(110-120 VOLT A.C.)

New Electric

SANDER-POLISHER

Only 2½ lbs. Handily compact. Quiet. 14,400 strokes P.M. in straight line action, so sands or polishes with grain of wood. Sands rust off metal, polishes furniture, car, brass—anything!

Only $13.95

FULLY GUARANTEED

WEN

250 WATT

"Quick-Hot"

ELECTRONIC SOLDERING GUN

Heats in 3 seconds—cools quickly too. Ideal for intermittent soldering—maintenance, repairs, in shop or outside—plus many production operations. Continuous Operation tested—*567 hours!* And with special tip *cuts plastic tile.*

Only $12.95

FULLY GUARANTEED

WEN PRODUCTS, INC.

5808 NORTHWEST HIGHWAY • CHICAGO 31, ILL.

(Export sales, Scheel International, Inc., Chicago)

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NEW EQUIPMENT DIGEST

BPA NBP

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Free! **New CATALOGUE**

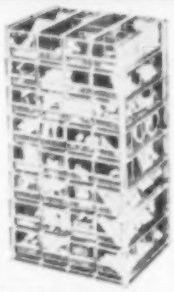
Showing 750 Different CABINET COMBINATIONS

A Type and Size for Every Need!

Plastic and Steel Drawers

In our CATALOGUE, you'll find the perfect CABINET for your particular requirement, whether it be for small parts storage, handling or display. 750 different combinations can be CUSTOM-BUILT at production line prices.

2.98 and up



All Plastic Cabinet

Portable Cabinet

Medium Size Plastic Drawers

Medium Size Plastic and Large Steel Drawers

Small Size Plastic Drawers

Send for CAT. JD-53-E

AKRO-MILS, INC. Box 989-E AKRON 9, OHIO

For more details circle **NED-34 F5** on enclosed inquiry slip

see the new battery operated

ohio **SHOP-LIFTER**

THE MAGNET FOR IN-PLANT USE

Because the Ohio Shop-Lifter contains its own power source—powerful, long-life *batteries* that last 5 to 12 workshifts without recharging—there's no danger of power failure. You can use it indoors or out . . . lifts up to 2000 pounds . . . length of swing not restricted by wires . . . weighs only 120 pounds. Send for your copy of Catalog 113 on the new Ohio Shop-Lifter. AA-1531

ohio ELECTRIC

Chester Bland *President*

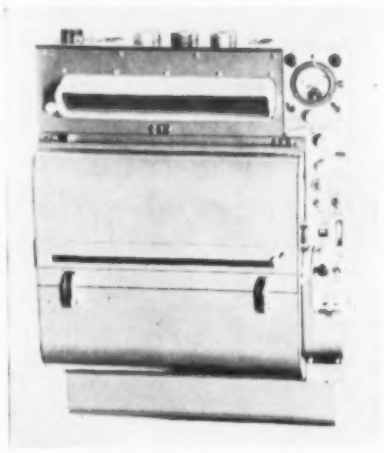
THE OHIO ELECTRIC MFG. CO.

5400 Dunham Rd. • Maple Heights • Cleveland, Ohio

For more details circle **NED-30 F5** on enclosed inquiry slip

RECORDING OSCILLOGRAPH

front panel controls ease operation



Record speeds and length selections, numbering, travel indication, footage counter and lamp adjustment, grouped conveniently on front panel of the series 700C recording oscillograph, facilitate its operation. Model 708C has a maximum of 36 channels and handles record widths to 8 in., while model 712C with maximum of 60 channels handles records to 12 in. Record speeds range from 1/32-ips to 144 ips. Four recording speeds are instantly selected from front panel, and a total of 48 steps and 24 separate speeds can be obtained by manually changing gears. Instruments can be equipped with appropriate shock or vibration mounts for mobile or airborne operation, table-top use or relay rack mounting. Made by **Minneapolis-Honeywell Regulator Co.,** Heiland Div., 130 E. Fifth Ave., Denver 9, Colo.

For more details circle **NED-32 F5** on enclosed inquiry slip

BIG shear

small cost

★

WILDER

SQUARE SHEARS will precision-cut up to 16-gage steel 52 in. wide. The 24-in. gap throat permits shearing to the center of 4-ft wide sheets. Front gage extends to 4 ft to support wide sheets. Calibrated back gage cannot bind. Ripping guide is adjustable and removable.

Shears are ideal for Deep Notching, Regular Shearing or Special Cutting.

Bronze bearings and gibs minimize wear, friction and maintenance, and compensate for wear.

Four-Edge Tool Steel Blades are quickly reversible to give four times the life of ordinary blades. Blades are adjusted without shimming. Even high alloy and stainless sheets are cut with maximum blade life.

Three models are offered—foot powered—air actuated with pedal control—air-hydraulic powered. *Write Today for Full Information!*

WILDER

MANUFACTURING CO., INC.

Route 2, Box 880, Carmel, Calif.

For more details circle **NED-35 F5** on enclosed inquiry slip

CHROMY

CHROMALOX "PACKAGED"

Electric **IMMERSION HEATERS**

WITH BUILT-IN THERMOSTATS

For heating water, oils, tars, greases, plating baths, pickling solutions, etc.

"Packaged" Chromalox Electric Heaters, combining heater and thermostat, are the economical, efficient solution to many heating problems. Uses include: heating tanks, drums and process kettles; melting greases, asphalts and similar viscous fluids; heating degreasing, pickling and plating baths. Available with sheaths of copper or steel, and with lead for use in corrosive solutions. Types, sizes and ratings to meet your needs.

For *all* the facts get CATALOG 50

It gives full data on thousands of time, money and labor-saving Chromalox Units.

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See other ad on pg. 75

CHROMALOX A-4402

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle **NED-31 F5** on enclosed inquiry slip

How many sections do you need?

***Stock* ROLLER CONVEYOR**

Offered in several sizes for average duty conveying. Roller spacing 4" or 6" centers. Roller lengths of 12", 16" and 20". Can be used with rolls set high, or inverted so that rolls set low and frame forms a guard rail. Both stationary and portable supports available. Use coupon for literature.

Logan **CONVEYORS**

LOGAN CO., 215 Cabel St. LOUISVILLE, KY.

LOGAN CO., LOUISVILLE, KY.

☐ Send literature on Stock Conveyors

Mr. _____

Firm _____

Address _____

For more details circle **NED-33 F5** on enclosed inquiry slip

FERRO FILTER® MAGNETIC SEPARATORS

Reduce Maintenance and Downtime of Hydraulic Equipment

Frantz FerroFilters keep hydraulic oils free from particles of iron, scale and rust which cause sticking and non-functioning of finely fitted valves and pistons. FerroFilter grids, strongly magnetized, grab and hold minute ferrous particles which would pass freely through edge-type strainers and even escape conventional cartridge-type filters.

Model PQ-3 and smaller

Send for BULLETIN PM-56

S. G. FRANTZ CO., Inc.

Brunswick Pike & Kline Ave.

P. O. Box 1138 Trenton 6, N. J.

For more details circle **NED-36 F5** on enclosed inquiry slip

NOW! Self-Oiling GUIDE PIN BUSHINGS OF POWDERED ALLOY STEEL

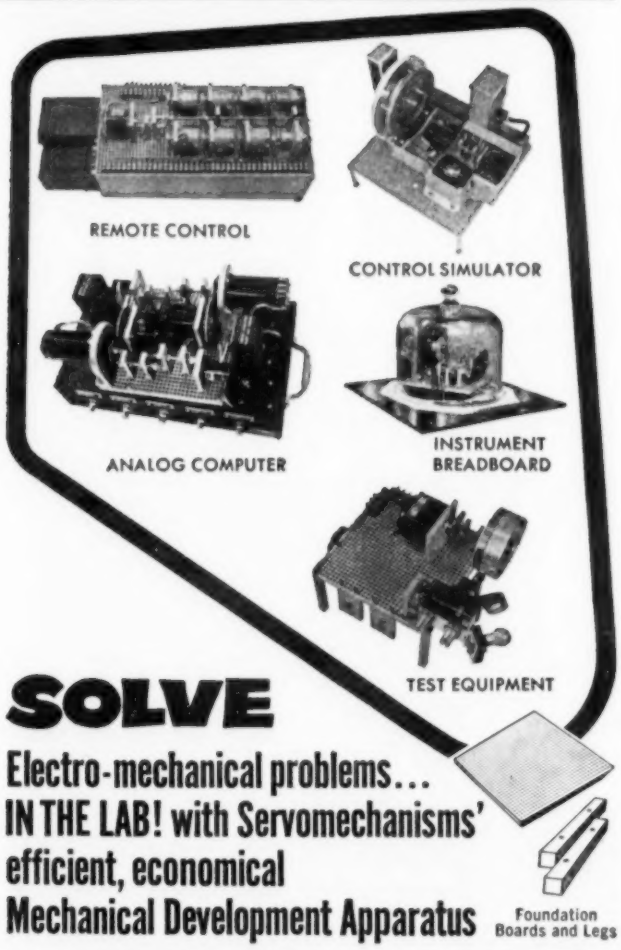
The above cutaway view clearly shows how oil automatically impregnates the powdered metal to lubricate friction surfaces.

Here's an entirely new concept in guide pin bushings—made of heat treated powdered alloy steel, each bushing has filled internal oil wells. Lubrication to friction surfaces is automatic and no external oiling is required throughout the long life of the bushings.

Wear characteristics of these bushings are comparable to that obtained with finest bronze bushings. In addition, this new R-B design greatly reduces guide pin wear and the possibility of seizing or galling. Self-oiling, less guide pin wear and longer life add up to minimum maintenance, reduced costs and maximum usage of press time. 4117A

RICHARD BROTHERS PUNCH DIVISION
ALLIED PRODUCTS CORPORATION
DEPT. 79 • 12629 BURT ROAD • DETROIT 23, MICHIGAN

▲ For more details circle **NED-37 F5** on enclosed inquiry slip ▲



SOLVE

Electro-mechanical problems... IN THE LAB! with Servomechanisms' efficient, economical Mechanical Development Apparatus

Pictured above are typical Mechanical Development Apparatus (MDA) assemblies, complete with electrical components. MDA is an assortment of standardized, precision-built, mechanical components designed for the purpose of simulating instrument and control systems in the breadboard phase of development. The apparatus makes designing extremely fast and economical. An appropriate group of these versatile units can be quickly assembled into a desired mechanism. The components lend themselves to endless use and re-use due to flexibility of design. Only a small assortment is needed to cover a multitude of problems. Prove out your design, quickly and economically with these versatile "tools."

SERVOmechaNISMS INC.
For complete information write for catalog to...
COMPONENTS DIVISION
625 Main Street
Westbury, L. I., N. Y.

C555

▲ For more details circle **NED-38 F5** on enclosed inquiry slip ▲

HOSE FITTING KITS simplify assembly of hoses

Necessary fittings, adapters and hose for industrial maintenance use are packaged in two metal cabinet type Socketless kits. Kit No. 5143 contains seventy-one ¼-in. fittings and 24 ft of ¼-in. hose on a reel dispenser. Kit No. 5144 has 93 fittings and two 24-ft reels of ¼-in. and ⅜-in. hose. Bulk hose is cut to the required length and pushed on the Socketless fitting by hand. Hose and fittings are rated for 250-psi service, and burst pressure is over 1000 psi. Made by **Aeroquip Corp.**, 303 S. East Ave., Jackson, Mich.

▲ For more details circle **NED-39 F5** on enclosed inquiry slip ▲

LUBRICATION SYSTEM VALVE slide chart shows operation

How the Dualine valve in the Farval centralized lubrication system operates is shown by this Valve Visualizer. The slide chart, actually a two-dimensional cut-away model, points out that the valve has only two moving parts, large diameter ports and passageways, adjustable discharge capacity and positive visual indicator. Pulling the slide up, then pushing it down puts the valve through a complete cycle of operation. Reverse side has a volumetric conversion table and a list of Dualine valve capacities. Slide chart is available free from **Farval Corp.**, 3283 E. 80th St., Cleveland 4, O.

▲ For more details circle **NED-40 F5** on enclosed inquiry slip ▲

MATERIALS HANDLING HOOK usable on flat plates and cylinders

Design of this Shake-Out materials handling hook gives it self-releasing action. Long, tapered point facilitates grabbing rings, pear links, eyebolts and lifting holes. Deep, straight throat adapts hook for efficient handling of flat plates and cylindrical shapes. Made by **Cleveland Hardware & Forging Co.**, 3275 E. 79th St., Cleveland 4, O.

▲ For more details circle **NED-41 F5** on enclosed inquiry slip ▲

This 8 Page Booklet will help you get *Better Quality Control!*

It tells how a number of precision manufacturers, including the leading automobile companies, use Lake Shore base and surface plates for dynamometers and other test instruments, for layout, mock-up, and inspection. Eight pages, well illustrated, contain application photos, engineers' dimensional drawings, surface tolerances, tensile strength, analysis, and other specifications.

Lake Shore plates are made of fine grained flaw-free "Lakenite" iron . . . and are available machined, ground or hand scraped. Standard plates are available in a wide range of sizes; Lake Shore engineers can design special plates to any size.

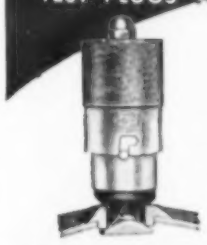
Send for your free copy of this helpful booklet.

Please send me a free copy of the new eight page illustrated Lake Shore base plate booklet.
Name_____
Title_____
Company_____
Address_____
City_____ Zone_____ State_____

LAKE SHORE
Engineering Company
IRON MOUNTAIN 6, MICHIGAN

▲ For more details circle **NED-42 F5** on enclosed inquiry slip ▲

SAVE TIME TESTING PRESSURE VESSELS
Seal Any Opening in 2 SECONDS WITH "Quick-Seal" TEST PLUGS AND FILLING CONNECTORS



"Quick-Seal" Test Plugs and Filling Connectors will reduce pressure test costs by sealing virtually any opening in 2 seconds or less. Can be used in unfinished or finished holes—shallow or deep—to provide leak-proof seal of air or liquid pressures up to 500 psi or greater. "Quick-Seal" Test Plugs and Filling Connectors are widely used by manufacturers of tanks, boilers, drums, castings, radiators, etc. . . . and are sold on a guaranteed satisfaction basis.

"Quick-Seal" Self-Sealing Test Plugs—use test pressure to insure leak-proof seal. Capacities to 500 psi.

"Quick-Seal" Self-Sealing Filling Connector—adapts and seals air or liquid pressure lines to standard or extra deep openings in all types of vessels. Capacities to 500 psi.

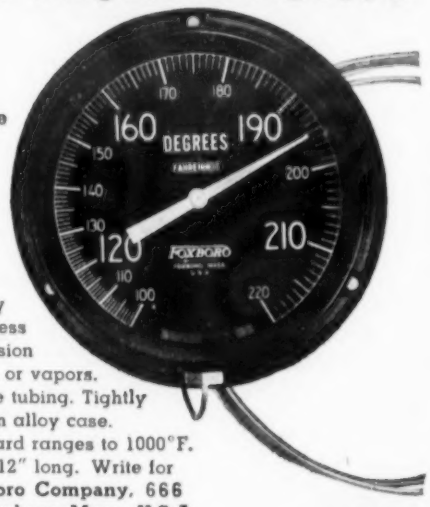
"Quick-Seal" Expanding Seal Test Plugs and/or Filling Connectors—manual or pneumatic types for low pressure testing. Can be used in rough or machined openings in all types of vessels, systems and assemblies.

Get complete details on time saving "Quick-Seal" Plugs and Connectors. Write for free illustrated catalog today.

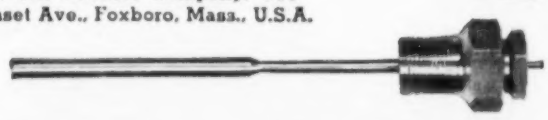
MECHANICAL PRODUCTS CORPORATION
176 North Ogden Avenue, Chicago 7, Illinois

▲ For more details circle **NED-43 F5** on enclosed inquiry slip ▲

NEW "Lifetime" Dial Thermometers



You're *always* sure of accurate temperature readings with this new Foxboro "Lifetime" Dial Thermometer. Welded "one-piece" bulb and connecting capillary tubing of 316 Stainless Steel prevent corrosion from liquids, fumes or vapors. Needs no protective tubing. Tightly sealed 5" aluminum alloy case. Available in standard ranges to 1000°F. Easy-to-read scale 12" long. Write for details. **The Foxboro Company, 666 Neponset Ave., Foxboro, Mass., U.S.A.**



FOXBORO Reg. U. S. Pat. Off. DIAL THERMOMETERS

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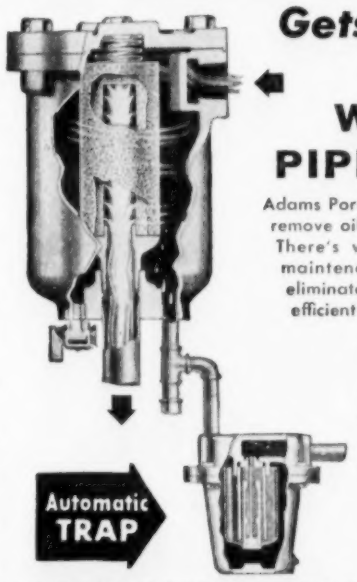
ADAMS FILTRATION for COMPRESSED AIR



Gets rid of—
OIL
WATER
PIPE SCALE

Adams Poro-Stone Filters efficiently remove oil, water, and pipe scale. There's virtually no service or maintenance. Automatic Trap eliminates attention — assures efficient filter operation.

- Permanent Poro-Stone element
- Centrifugal separation
- Diffused filtration
- Low pressure loss
- Prompt delivery of all sizes

Write today for Bulletin 117

R. P. ADAMS COMPANY, INC., 227 E. Park Dr., Buffalo 17, N.Y.

ADAMS *Poro-Stone* AIR FILTER

▲ For more details circle **NED-45 F5** on enclosed inquiry slip ▲

Introducing

THE SMALLEST *Mueller* CLIP EVER MADE!

the MINI-GATOR

100 PER HANDFUL! actual size

For *faster* electrical testing in *tighter* spots.

All the speed of clip testing in the most miniaturized equipment, with complete protection against shorts and shocks. Clip is completely covered right down to the nose by a flexible vinyl plastisol insulator with a "lip action" tip slot. Shank, jaws and teeth are insulated at all times. Supplied in red and black for instant lead identification.

AVAILABLE IN STEEL (Cadmium plated) or SOLID COPPER. Only 1-1/16" long, only 1/20 oz., only 11/64" O.D. nose, (including insulator), but ample 3/16" jaw spread.

OTHER *Mueller* CLIPS

No. 63 INSULATED ALLIGATOR CLIP Steel or copper. Completely insulated by factory-applied flexible vinyl sheath. 2-11/32" long.

No. 50-C NEEDLE CLIP Solid bronze. Needle in one jaw, pierces insulated wire, making instant electrical contact. 2-1/4" long.

No. 58 GROUND CLAMP Grounds industrial equipment and home appliances. Screw contacts grip.

No. 27 GENERAL TEST CLIP Typical high-grade general test clip. Meshing teeth on 3 sides each jaw. 2-7/16" long.

INSULATORS TO FIT ALL MUELLER CLIPS

REQUEST FREE MINI-GATOR SAMPLES FROM FACTORY

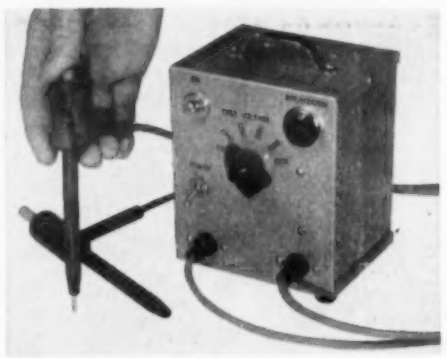
Mueller Electric Co. 1567L East 31 St., Cleveland 14, Ohio Telephone: PRospect 1-5225

WORLD'S MAJOR CLIP SPECIALISTS . . . SINCE 1908

▲ For more details circle NED-46 F5 on enclosed inquiry slip ▲

HIGH VOLTAGE TESTER

FOR YOUR PRODUCTION LINE



GIVES BUZZER AND LIGHT SIGNAL IF BREAKDOWN OR GROUNDS EXIST IN ELECTRICAL COMPONENTS

FAST ..... You watch your work not the Tester

EASY ..... Slim retracting prods test in tight spaces

TESTS ..... Six test voltages from 500 to 2500 volts a-c

In stock—Data gladly sent

SLAUGHTER COMPANY PIQUA, OHIO

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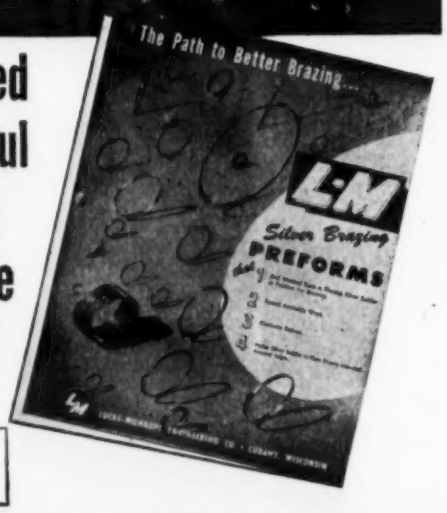
IF *Silver Brazing* IS PART OF YOUR PRODUCTION

You'll Need This Helpful 10 Page Reference Book!!



GIVES ALL THE FACTS ON BRAZING WITH PREFORMS

- Complete information on no tangle-notch coil rings
- Helps you select the proper preform for the job
- Gives the complete line of coined and blanked washers
- Lists silver brazing and soldering alloys
- Helps you get quick, accurate alloy calculation with tables for all commonly used alloys.

Write for Your FREE Copy Today!

LUCAS-MILHAUPT ENGINEERING CO.

5064 S. LAKE DRIVE, CUDAHY, WISCONSIN

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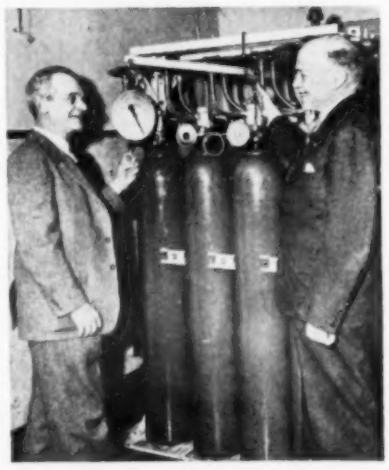
HAND TRUCK treads aid in climbing stairs

Rubber treaded climbing legs on the Stairwalking Dolly hand truck do not depend upon friction with the steps, as they "walk" up wet, icy or polished stairs when the truck's handles are pumped up and down. Truck has the usual wheels for level travel and the wide belt treads for stair use. Optional screw-operated lifter shelf on the magnesium truck permits one man to raise heavy objects into position. Made by **L-S Heating & Engineering Co.**, 906 W. Lycoming St., Philadelphia 40, Pa.

▲ For more details circle NED-49 F5 on enclosed inquiry slip ▲

FIRE EXTINGUISHING SYSTEM for liquid or electrical hazards is self-powered by carbon dioxide

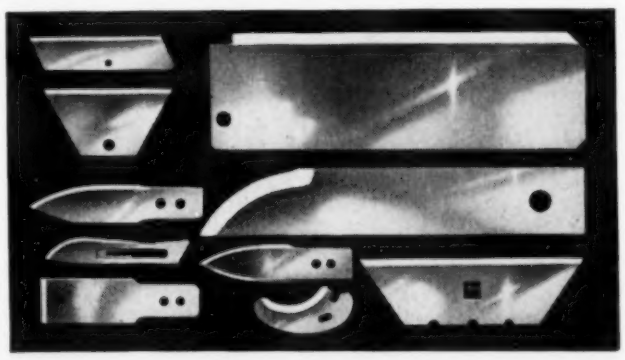


Highly flexible, this pressure - operated fire extinguishing system operates on a rate-of-temperature rise principle. It is suitable for flammable liquid or electrical hazards and uses carbon dioxide under a pressure of 850 psi both for its power and as its extinguishing agent. Thus, apparatus is self-contained and needs no outside source of power.

By means of pressure-operated switches and trips, system will close vents, dampers and valves or shut off machinery when system is caused to operate by a fire. Other devices are available to sound alarms and to operate system manually. Addition of pneumatically operated directional valves permits one basic set of cylinders to stand automatic guard over a number of hazard spaces, even though each requires a different volume of carbon dioxide to smother blaze in the areas.

With this type of installation, the equipment automatically detects the fire, selects the required number of carbon dioxide cylinders, actuates them, and routes the fire smothering agent to the "in trouble" area only. Made by **Walter Kidde & Co.**, Dept. A, 675 Main St., Belleville 9, N. J.

▲ For more details circle NED-50 F5 on enclosed inquiry slip ▲



WHY RE-SHARPEN?

CRESCENT disposable knife blades are custom engineered to your specifications — made of Swedish surgical steels in any length required, width to 2¼ inches and thickness to 0.050-in.

CRESCENT disposable knife blades with razor-honed edges eliminate the cost of re-sharpening dull knives — give you higher production, more uniform product, greater efficiency, and longer cutting life.

CRESCENT engineers will solve your cutting problems, too. At no obligation, write and specify the type of knives you use, how many, what you cut, and how.

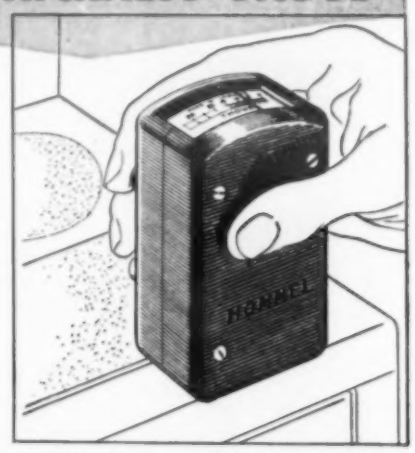
Write to: Engineering Department
CRESCENT MANUFACTURING CO.
Fremont, Ohio

▲ For more details circle NED-51 F5 on enclosed inquiry slip ▲

MINIATURE

LAYER THICKNESS GAUGE

- Measures any non-magnetic material such as paint, enamel, lacquer, plastic, or non-ferrous metals on curved as well as flat surfaces
- Can be used on iron or steel castings, strips, rod or tube and flat or curved sheets
- Guaranteed accurate



A single probe type gauge, which measures the thickness of a layer of paint or other protective coating without damage to the surface, and with greater ease than formerly possible. The instrument is provided with a zero adjuster and locking nut which enable the zero to be set to suit the base when measuring. The adjuster is provided to allow for variations in size, thickness and permeability of the bases.

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Pottery, Ceramic Colors, Steel and Cast Iron Frit, Chemicals • Suppliers

Our Technical Staff and Samples are available to you without obligation. Let us help you with your problems. Write, wire or phone . . . today.

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4747 E. 49th Street Los Angeles, California

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MECHANIZE 4 *Scrubbing* Operations into 1

with a COMBINATION SCRUBBER-VAC!

This single unit, *Finnell's 213P* for large-area floors, *completely mechanizes scrubbing.* Applies the cleanser, scrubs, flushes, and picks up—*all in one operation!* No switches to set for *fast* or *slow. Self-propelled* . . . 26" brush spread. (Powder Dispenser and Level Cable Wind are accessories.) *Finnell* makes a full range of sizes . . . available on lease or purchase plan. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 5506 East Street, Elkhart, Indiana.

● Cleans up to 8,750 sq. ft. per hour!

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines

FINNELL

BRANCHES IN ALL PRINCIPAL CITIES

▲ For more details circle NED-53 F5 on enclosed inquiry slip ▲

GRIEVE-HENDRY PORTABLE ELECTRIC OVENS...

Standard Models For Every Special Need!

Model CR-1

10 cu. ft. capacity—30" wide x 25" deep x 24" high. Removable shelves and drip pan. . . . . $89.50 f.o.b. Chicago

Portable. Costs less than 5c per hour to operate. Adjustable temperature control to 225° F. Fan driven forced air circulation. Uniform temperature throughout. Plugs into any 110V wall outlet—no special wiring required.

Quick Quotations —Prompt Delivery —Reasonable Prices — on Ovens made to your specifications.

Can be used in a group or bank. Use them on the production line —save handling—hauling.

Other standard models with temperature ranges to 1000°F. available. Write for literature.

GRIEVE-HENDRY CO., INC.

1408 W. CARROLL AVE. CHICAGO 7, ILL.

Export Dept.: 306 W. Washington Blvd., Chicago 6, Illinois

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SAFE in Hazardous Atmospheres – and Light too!

FRONTIER 40-E Aluminum Pipe Wrenches

- ★ Non Sparking Wrench Jaws of Special Beryllium Alloy.
- ★ Lightweight. Less than half the Weight of Same Size in Bronze or Malleable Wrenches.
- ★ Extra Strong. Exceeds Std. Specs. for Heavy Duty Pipe Wrenches.
- ★ Wrenches Available in Sizes 14 inches thru 36 inches.

STEEL JAWS ALSO AVAILABLE

ORDER FROM YOUR DISTRIBUTOR or write for complete information

Manufactured by
FRONTIER BRONZE CORPORATION
4859 Packard Road Niagara Falls, N. Y.

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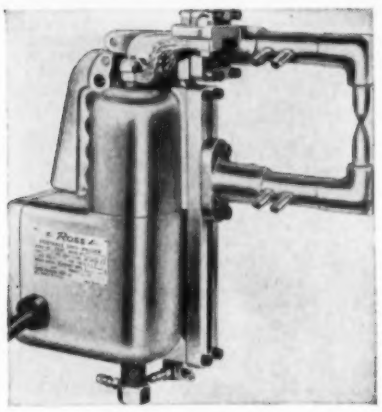
NEW! Portable Spot Welder



Features Built-In ELECTRONIC TIMING CONTROL

A PRODUCTION WELDER

Built for Better Welding and Hard Service

COMPLETELY WATER COOLED

Model 5403 220-240V-60 Cycle AC

TAKE THE GUESS-WORK OUT OF SPOT WELDING
Speed Up Production — Eliminate Waste

The ROSS Spot Welder is a PRODUCTION Welder, built for better welding and hard service. This all-in-one unit contains such outstanding features as—Built-in Electronic Thyrotron Timing Control which operates a solenoid contactor (an exclusive Ross feature)—High Amperage, over 17,000 at point of weld—Timing range from 1/60th to a full second—Uniform welds of steel and other metals up to 3/16" combined thickness, as fast as operator can squeeze handle—Throat depth of 6" with variable opening from 3" to 11"—Extremely High Electrode Pressure, up to 1000 pounds by adjustment of tips and slight hand pressure—Tips are easy to adjust and easy to replace—Removable carrying handle serves also for hanging the unit from a counterbalance or sky hook—Complete unit weighs only 55 pounds!

USE AS FOOT OPERATED FLOOR MODEL

Also available at a small extra cost is a stand into which the Ross Welder may be quickly mounted for use as a foot operated floor model.
Whatever your welding requirements may be—
Investigate Ross Welders
Write for FREE illustrated folder containing complete data and prices

ROSS MACHINE TOOL CO.,
P. O. Box 122, Dept. NED-6, Chicago Ridge, Ill. Phone: Garden 2-0305

▲ For more details circle **NED-56 F5** on enclosed inquiry slip ▲

Direct Temperature Reading

On ANY SURFACE or in ANY MATERIAL

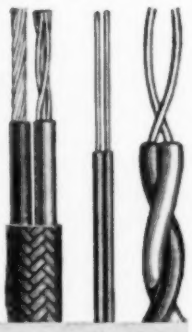
The Xactemp Hand Pyrometer is the answer to quick, accurate temperature determination in countless processes and operations. And, it's so convenient to use.

Model LT-840 Xactemp Hand Pyrometer can be used with surface, ribbon, needle, and handle thermocouples and with rigid and flexible extension arms. All are quickly interchangeable—without adjustments. Recommended for field service, laboratory, and production-line use.

Ask for Bulletin XT351

5648

"SERV-RITE" THERMOCOUPLE WIRE and EXTENSION WIRE



Most standard wires and insulations are carried in stock for quick delivery. Other insulations, in long or short runs, are manufactured to specifications.

Serv-Rite wire is insulated in Gordon's own wire plant under rigid controls to assure consistent, uniform high quality.

Bulletin 1200 gives general application data, description of the wires, and ordering information. Ask for a copy.

CLAUD S. GORDON CO.
Manufacturers—Engineers—Distributors
621 West 30th Street, Chicago 16, Ill.
2013 Hamilton Ave., Cleveland 14, Ohio

▲ For more details circle **NED-57 F5** on enclosed inquiry slip ▲

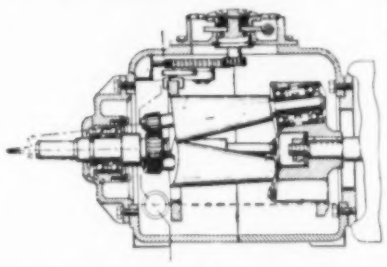
HOSE CLAMP
easily affixed with pincer tool

Three seconds is time required to apply this general purpose hose clamp, usable for lines carrying compressed air, oxygen, acetylene, chemicals, water, steam acids and gasolines. Installed with pincers, it provides lasting clamping action under extreme internal hose pressure, movement and rough usage. Small size clamp has two U-shaped lugs or folds, while larger sizes have three lugs. Installation is by crimping it in place by squeezing the parallel sides of the lugs. Made of ferrous and nonferrous metals, clamps are offered in 20 sizes from ¼ to 2⅝ in. OD. Larger sizes can be ordered. Made by **Circle Clamp Corp.**, Dept. NED, 39 Broadway, New York 6, N. Y.

▲ For more details circle **NED-58 F5** on enclosed inquiry slip ▲

VARIABLE SPEED DRIVE
provides accurate speed adjustment above and below input speed

Small but extremely accurate speed changes required on applications where one portion of the machine must be precisely timed with respect to another are provided by type K Speed Corrector drive. Compact unit incorporates both variable speed drive and built-in differential.



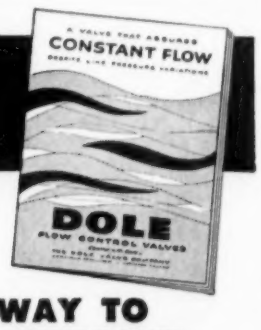
For most applications, transmission is equipped with built-in gear reduction (single or two-stage helical spur or worm gear reducer) so that the range of infinitely variable output speed is both above and below input speed. On applications where the input speed is low or variable, transmission is equipped with a spring loading device which provides traction loading between rollers and encircling control ring.

Entire assembly, including transmission, control, built-in reducer and built-in motor, if desired, can be mounted with four bolts. Variety of special controls to provide automatic speed correction in response to a control signal is available. The 29 series is offered with ¼-hp 1800-rpm motor or for coupled 1800-rpm motors up to 1½ hp, while the 150 series has 1½-hp built-in 1200-rpm motor or can be coupled to 1800 motors up to 3 hp. Made by **Graham Transmissions Inc.**, Dept. NED, Menomonee Falls, Wis.

▲ For more details circle **NED-59 F5** on enclosed inquiry slip ▲

WRITE FOR THIS BOOK

NEW



if the equipment you manufacture handles fluids this book shows you

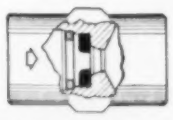
A LOW-COST WAY TO IMPROVE YOUR PRODUCT

A simple, inexpensive little valve can give you constant predetermined flow of fluids regardless of variation in pressure. For example:

- **ON TANKLESS HEATERS** water always runs hot. No cooling because of too rapid flow.
- **ON WATER COOLED AIR CONDITIONERS** controlled flow keeps condensers cool—prevents waste.
- **ON DRINKING FOUNTAINS** always a proper stream —no inadequate dribble—no dousing of drinker.

Only three examples of how a Dole Flow Control Valve has solved the problems of other manufacturers. If you manufacture equipment that handles fluid write for this NEW book.

THE DOLE VALVE COMPANY,
1901 W. Carroll Avenue, Chicago 12, Ill.



Dole Flow Control Valve only 2 to 3 in. long. No moving parts — low cost — needs no adjustments.

SPRINKLER— SHOWER— DRINKING FOUNTAIN

Control with **DOLE** (TRADE-MARK)

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New! haskins hask AIR GRINDER

most powerful air turbine grinder in its class!

75,000 R.P.M. (1/5 H.P. prony brake test)

- **Permanently sealed bearings . . . never needs lubrication in air lines or grinder.**
- **Removable nose piece for deep grinding.**
- **Gyro action of turbine holds tool steady.**

Here's power—SUSTAINED POWER —like you've never experienced before in an air grinder . . . power unexceeded by any other air grinder in the same price range . . . **maintains its high-speed efficiency under load!** Built with a lightweight, contoured, hand-fitting aluminum housing, the Haskins **hask AIR** Grinder handles easily, balances perfectly . . . excellent for the most precise grinding job. Complete kit includes: carrying case, adapter hose, mounted points, dressing stone and wrenches.

WRITE TODAY FOR BROCHURE

haskins
603 S. Washtenaw
Chicago 12, Ill.

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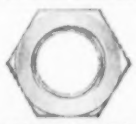
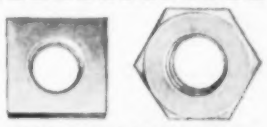
JACOBSON

STOP-NUTS: Automatically Locks In Any Position On Screw Whether Seated Or Not

SELF-LOCKING NUTS: Free Spinning—Locks When Seated



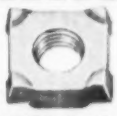
VOLUME-CONTROL & SWITCH MOUNTING NUTS: Single & Double Chamfer



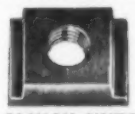
MACHINE-SCREW NUTS: Standard And Small Pattern—Single & Double Chamfer

CONDUIT LOCKNUTS

WING-NUTS



WELD-NUTS: For Projection Welding



CLINCH NUTS

Above nuts supplied in STEEL • BRASS • ALUMINUM • STAINLESS.

JACOBSON NUT MFG. CORP. Box 177-A Kenilworth, N. J.

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WEBBER CASE HISTORY No. 237 WESTINGHOUSE CORP.

TEMPERATURE and Humidity Control . . features of Webber Environmental Test Unit!

Webber designed *fully automatic control* of temperature *and* humidity into this test unit for Westinghouse Electric Corp., Pittsburgh.

While this unit required control from —80 F. to +200 F. and 20%-90% relative humidity, Webber can provide a complete *high-low* temperature and humidity control range. Webber designs and manufactures a full line of Standard Environmental Test Units, as well as special application equipment.

If you have an Environmental Test problem of *any* kind, Webber Engineers *want* to be of service to you. Send coupon for brochures on new Chest-Type Unit and Environmental Test Equipment.

Write today and give us your request . . . for engineering assistance, quotations, your specifications, or your order.

TRADE MARK WEBBER

Webber Mfg. Co., Inc.
2740 Madison Ave., Indianapolis 3, Indiana
Please send Environmental Test Brochures.
Chest Type..... General Equipment.....
Name_____
Address_____
City-State_____
Company_____ Title_____

Webber Manufacturing Co., Inc. • Indianapolis 3, Ind.

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Your insides feel like a SAND STORM ?

YOU NEED A

DUPOR AUTOMATIC

Water-Cooled Respirator

Sponge filter saturated in cool, clear water provides moist air for comfortable breathing. Ideal protection against dust, fumes, smoke, paint spray. Full panorama visibility. Can be worn with goggles or glasses. Work refreshed, order a water-conditioned respirator today! Sample, $2.00 postpaid.

H. S. COVER, SOUTH BEND, IND.
P. O. Box #2508

"Respirators for Industry since 1894"

For more details circle **NED-75 F5** on enclosed inquiry slip

Pump-don't slop INDUSTRIAL LIQUIDS

Get rid of antiquated methods such as pouring, drawing, siphoning, spigoting. Install Tokheims! These high-vacuum pumps are invaluable in maintenance and production work; they help build a barrier against fires and accidents, halt waste, speed production, and improve housekeeping.

Tokheims deliver up to 20 gallons per 100 strokes. No piston to leak, stick, or freeze. Available with hose or spout outlets.

Call your dealer, your Tokheim representative, or write for literature.

General Products Division
TOKHEIM CORPORATION
Designers and Builders of Superior Equipment Since 1901
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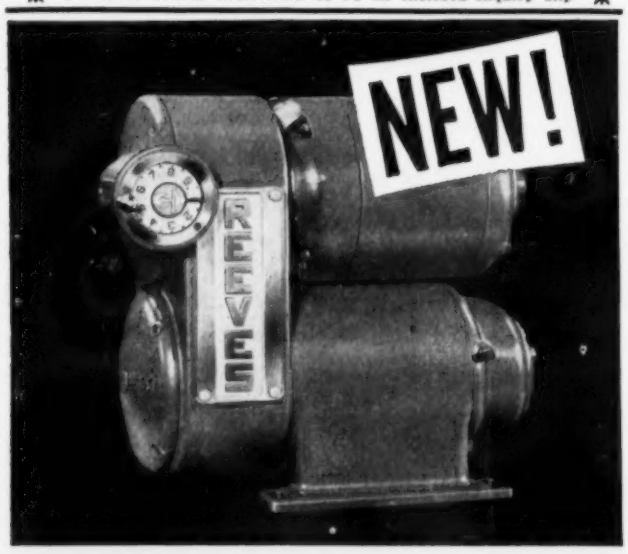
Factory Branch: 1309 Howard St., San Francisco 3, Calif.
Canadian Distributor: H. Reader, 205 Yonge St., Toronto

QUALITY TOKHEIM HIGH VACUUM HAND PUMPS

For more details circle **NED-76 F5** on enclosed inquiry slip



REEVES *Fractional HP Vari-Speed Motodrive with* **10:1** *speed range. Completely new design! Check all these Reeves extras!*

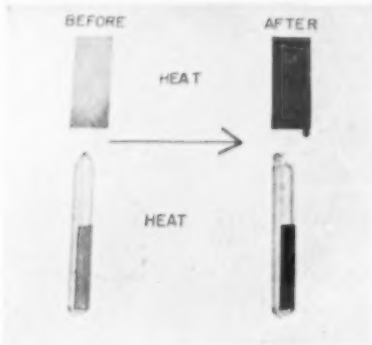
1 Speeds from 3 to 4660 rpm. Speed ranges to 10:1.
2 New "all-position" 14-turn handwheel control.
3 New "full-vision," sealed speedial indicator.
4 New horizontal or vertical down output shaft.
5 New spiral groove lubrication.
6 112 different assemblies to choose from.

Send today for complete details and new catalog. Specify ND9c-M543

REEVES PULLEY COMPANY • COLUMBUS, INDIANA
Division of Reliance Electric and Engineering Co.

For more details circle **NED-77 F5** on enclosed inquiry slip

TEMPERATURE INDICATORS change color at set temperatures



Thermotube sealed-in-glass thermometers and Thermopaper paper thermometers are suited for indicating predetermined oven, processing and equipment temperatures. Thermopapers are available in 30 different temperature ratings from 115° to 490° F. They are packaged in glass vials of 100 strips measuring 5/16 x 2 in. Their color changes from white to black sharply when temperature reaches rating, within 1° F. Similarly indicating Thermotubes, which have paper sealed in a small glass tube, are available in 38 temperature ratings from 100° to 470° F. By using two or more tubes or papers, temperatures can be pinpointed. Made by **Paper Thermometer Co.,** Dept. NED, 10 Stagg Dr., Natick, Mass.

For more details circle **NED-78 F5** on enclosed inquiry slip

GLASSED STEEL STORAGE TANKS in capacities from 1000-5000 gallons

Capacities from 1000 to 5000 gallons are offered in line of Utilitank glassed steel storage tanks. Units are glassed inside to prevent contamination to stored products and outside to prevent rusting. Perfumes, ink, alcohol, wax, liquid sugar, juices, paint, paste, oils, syrups, water, wines, mild chemicals and dry powders are among products which can be stored safely in Utilitanks. Tanks have 2 15/16-in. inlet hole in center of top head, a 2-in. outlet at bottom of the straight side and two openings for connecting a gage glass, supplied as an extra. An 18-in. diameter manhole in top head affords access for cleaning tank. Bottom head has flange to form a base. Made by **Pfaudler Co.,** Dept. NED-2, 1000 West Ave., Rochester 3, N. Y.

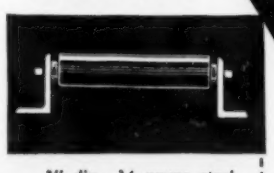
For more details circle **NED-79 F5** on enclosed inquiry slip

Material Handling Equipment

Borne Co.—Special attention is given to large and heavy duty bar, die and pallet racks in 16-page catalog 30 on "Material Handling Equipment." Standard model trucks, portable work benches, carts and dollies are also included. All items are illustrated.

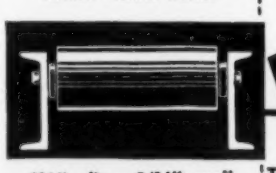
For more details circle **NED-80 F5** on enclosed inquiry slip

HOW DO YOU SELECT A ROLLER CONVEYOR?



1" dia., 14 gauge steel roller, 1/4" hex axle, angle frame.

2¼" dia., 16 gauge steel roller, 3/8" hex axle, formed channel frame.



3½" dia., 5/16" wall steel roller, 1-1/16" hex axle, structural channel frame.

BUSCHMAN features a *complete* range of roller diameters, from 1" to 3½" . . . wide selection of bearings to fit individual operating conditions . . . choice of frame types and sizes . . . widths and centers of rollers to specifications. To be sure the conveyor will do *your* job best —

LET A BUSCHMAN ENGINEER RECOMMEND!
(No obligation, of course)

Write today for Catalog No. 60

PRODUCE MORE . . . FOR LESS with Buschman Conveyors

C-146-EWB

THE E. W. BUSCHMAN COMPANY
4482 Clifton Avenue • Cincinnati 32, Ohio
REPRESENTATIVES IN PRINCIPAL CITIES

For more details circle **NED-81 F5** on enclosed inquiry slip

PREVENT REVERSAL of CONVEYORS & ELEVATORS with S-A ROLLER-TYPE HOLDBACKS

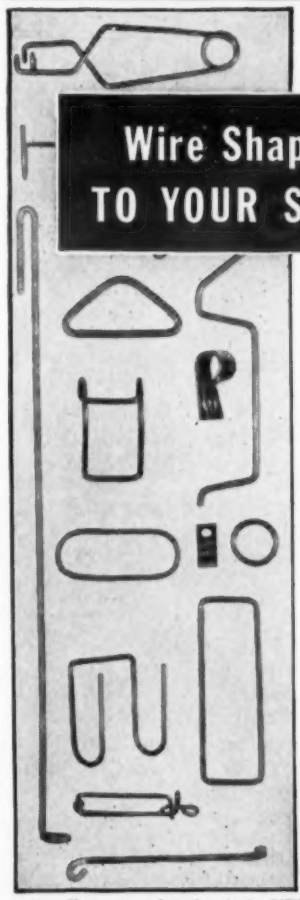
- PROTECT MEN and EQUIPMENT, PREVENT LOSS
- ENGAGES WITHOUT SHOCK
- INSTANT HOLD . . . INSTANT RELEASE
- SIMPLE RUGGED CONSTRUCTION . . . EASILY INSTALLED
- NO RATCHET TO BECOME FOULED

FREE Information available . . . WRITE TODAY for Bulletin 651

IN STOCK . . . FOR IMMEDIATE DELIVERY

STANDARD PRODUCTS DIVISION
STEPHEN S-ADAMSON MFG. CO.
12 Ridgeway Ave. Aurora, Illinois

For more details circle **NED-82 F5** on enclosed inquiry slip



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● Your wire forms are produced fast, accurately and at low cost with Sommer mass-production methods.

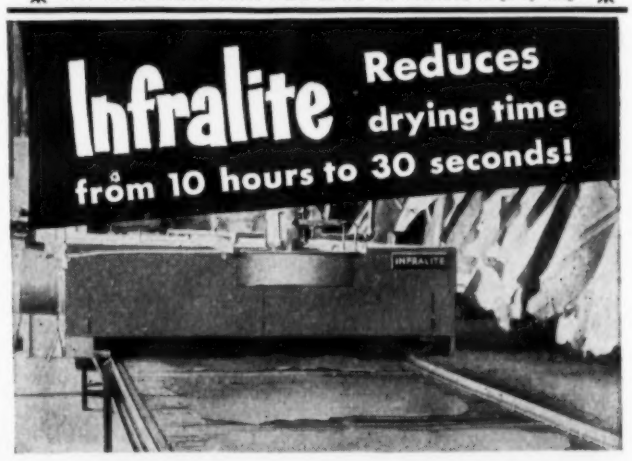
Speedy, automatic plating equipment handles either large or small assemblies. Popular new Zinc Iridite process adds a bright, durable, economical finish.

Sommer offers complete forming, stamping, cut-threading and butt-welding services. Let us work with you in designing and producing any wire shapes or forms needed for your defense contracts. Send sample, blueprint or drawing—see how Sommer can save you time and money.

METALCRAFT Sommer's Corporation

SOMMER METALCRAFT CORPORATION
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

For more details circle **NED-83 F5** on enclosed inquiry slip



Another outstanding example for INFRALITE Radiant Heating Lamps is this installation at a leading leather manufacturers plant. This was accomplished by the use of only fifteen 3000 watt radiant heating lamps.

If your problem involves—
• DRYING INKS, POWDERS, PAINTS ETC. • CURING PLASTICS • BAKING VARNISH • PASTEURIZING METALS or any of hundreds of other applications

AND IF YOU NOW USE—
AIR DRYING—GAS, OIL OR ELECTRIC HEAT

You will be amazed by the increased quality control and big savings in money, time and labor when you use INFRALITE RADIANT HEAT.

WITHOUT OBLIGATION—Ask our Representative to call, or Write for Bulletin 55.

N. J. THERMEX COMPANY, INC.
538 Bergen Street, Harrison, N. J. Hu 5-2323

For more details circle **NED-84 F5** on enclosed inquiry slip

Please Pass this Issue of NEW EQUIPMENT DIGEST Along to a Co-Worker

Please Pass this Issue of NEW EQUIPMENT DIGEST Along to a Co-Worker

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Cleveland, Ohio

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To obtain additional information on any items in this issue of NEW EQUIPMENT DIGEST, circle numbers below which correspond with those of the desired items. Your request will be forwarded promptly to the manufacturer. Please give your name, title, company and address. This postage-free mailer should be folded as indicated for mailing.

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2	52	102	152	202	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002	1052	1102	1152
3	53	103	153	203	253	303	353	403	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153
4	54	104	154	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154
5	55	105	155	205	255	305	355	405	455	505	555	605	655	705	755	805	855	905	955	1005	1055	1105	1155
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15	65	115	165	215	265	315	365	415	465	515	565	615	665	715	765	815	865	915	965	1015	1065	1115	1165
16	66	116	166	216	266	316	366	416	466	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166
17	67	117	167	217	267	317	367	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167
18	68	118	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168
19	69	119	169	219	269	319	369	419	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169

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21	71	121	171	221	271	321	371	421	471	521	571	621	671	721	771	821	871	921	971	1021	1071	1121	1171
22	72	122	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922	972	1022	1072	1122	1172
23	73	123	173	223	273	323	373	423	473	523	573	623	673	723	773	823	873	923	973	1023	1073	1123	1173
24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924	974	1024	1074	1124	1174
25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025	1075	1125	1175
26	76	126	176	226	276	326	376	426	476	526	576	626	676	726	776	826	876	926	976	1026	1076	1126	1176
27	77	127	177	227	277	327	377	427	477	527	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177
28	78	128	178	228	278	328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178
29	79	129	179	229	279	329	379	429	479	529	579	629	679	729	779	829	879	929	979	1029	1079	1129	1179
30	80	130	180	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180
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44	94	144	194	244	294	344	394	444	494	544	594	644	694	744	794	844	894	944	994	1044	1094	1144	1194

FOLD ON THIS LINE

45	95	145	195	245	295	345	395	445	495	545	595	645	695	745	795	845	895	945	995	1045	1095	1145	1195
46	96	146	196	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196
47	97	147	197	247	297	347	397	447	497	547	597	647	697	747	797	847	897	947	997	1047	1097	1147	1197
48	98	148	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198
49	99	149	199	249	299	349	399	449	499	549	599	649	699	749	799	849	899	949	999	1049	1099	1149	1199

PLEASE FILL IN COMPLETELY—PRINT OR TYPEWRITE **F-5**

—USE THIS SLIP FOR JUNE 1955 ISSUE ONLY—

NAME ..... TITLE .....

COMPANY .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

Principal Products Manufactured .....

..... Approx. Number of Employees in Plant .....

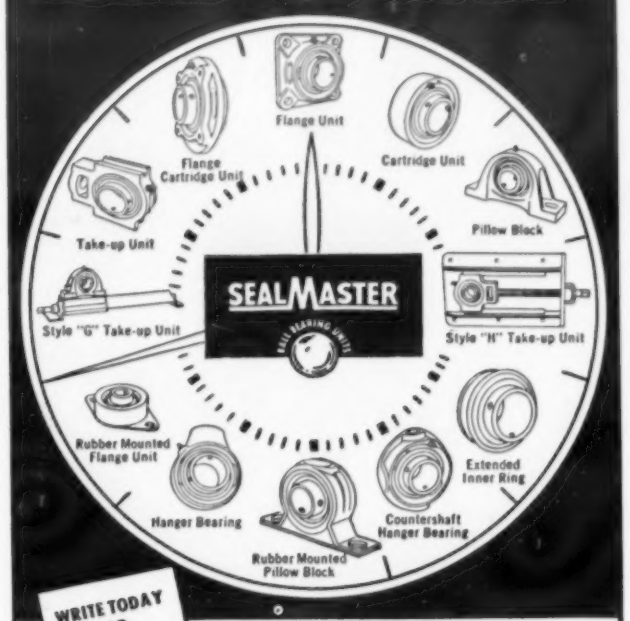
Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

To Use this Self-Mailer . . . Just Fill It In, Fold, Seal and Mail . . . No Postage Needed

To Use this Self-Mailer . . . Just Fill It In, Fold, Seal and Mail . . . No Postage Needed

ASSURED BEARING PERFORMANCE
ROUND THE CLOCK!



WRITE TODAY FOR BULLETIN # 454

BEARING DIVISION
STEPHENS-ADAMSON MFG. CO.
12 RIDGEWAY AVENUE
AURORA, ILLINOIS

For more details circle NED-85 F5 on enclosed inquiry slip

It's New!
A TRUCK DESIGNED for Cartons

Handles ½-¾ and full keg size cartons and boxes and is quickly adjustable for oversize packages.

Truck stands upright when not in use.

Slip tapered feet under carton, drop hook over the top, pull handle to balancing position and carton moves easily on roller bearing wheels.

Not expensive either.

Write for Bulletin #CC-33

The Sabin Machine Co.
6536 Carnegie Ave. Cleveland 3, Ohio

For more details circle NED-86 F5 on enclosed inquiry slip

MERRILL LIFTING CLAMPS
THE HEAVIER THE LOAD THE TIGHTER THE GRIP!

Safer and Speedier Lifting at Less Cost...have made MERRILL-Volz LIFTING CLAMPS the choice of large Steel Mills everywhere.

SAFER
- Safety factor of 5 to 1.
- Factory tested at double rated capacity.

GREATER SPEED AT LESS COST
- Entirely Drop Forged and Heat Treated.
- Working parts entirely enclosed.
- Pins do not rotate in frame eliminating wear.

Available in Stainless Steel.

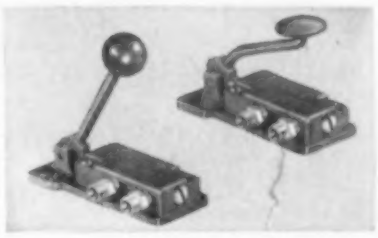
Sold by Better Distributors Everywhere.

MERRILL BROTHERS
56-13 Arnold Avenue.
Maspeth, L. I., N. Y.
FINE FORGINGS SINCE 1866

Producers of DROP FORGED SHACKLES, CLEVIS NUTS, TURNBUCKLES & EYE BOLTS.

For more details circle NED-87 F5 on enclosed inquiry slip

AIR VALVES
foot, hand and fingertip types



Improved No. 52 foot control valve is a three-way unit for operation of various air devices. It features easy pedal action and remains in open or closed position without constant foot pressure. Hand control valve No. 75 remains open or closed without constant hand pressure and has a base plate with mounting bosses for attachment to bench top or machine. Three-way fingertip valve No. 74 provides fast action for presses, rams or air cylinders up to 6-in. bore. It is also equipped with a base plate for bench top or machine mounting and can be set up in series for safety installations. All three types have ¼-in. NPT female ports equipped with ¼-in. male hose fitting connectors. Made by **W. R. Brown Corp.**, 2673 N. Normandy Ave., Chicago 35, Ill.

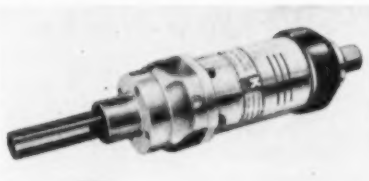
For more details circle NED-88 F5 on enclosed inquiry slip

THERMAL MOTOR PROTECTOR
calibrated to act within 5° F

Protection of motors drawing up to 10 amp at 115 v or 5 amp at 230 v is provided by this Fascostat thermal motor protector. Fully sealed, unit is calibrated at ±5° F. Special ratings are offered also. Copper-clad steel body withstands normal insertion pressures and impregnating cycles. Made by **Fasco Industries, Inc.**, 230 Toppin St., Rochester 2, N. Y.

For more details circle NED-89 F5 on enclosed inquiry slip

AIR MOTOR
eight styles rated at 1 hp



Vane type air motor is offered with five styles with center spindle gear case and in three styles with off-center spindle gear case. Identified as 71J-40 series, motor develops 1 hp. Center spindle style is less than 13 in. long and 3¼ in. diameter. Offset style is under 15 in. long, and its maximum diameter is less than 4½ in. Continuous duty motor can provide quick starts and stops without overheating and can take repeated or extended stalling without burning out. It is nonsparking for safe use in hazardous locations. Speed is variable from zero to full speed by an air valve. Made by **Gardner-Denver Co.**, Keller Tool Div., Dept. N, Grand Haven, Mich.

For more details circle NED-90 F5 on enclosed inquiry slip

NEW!
ALL STICHT HAND TACHOMETERS now equipped with IMPROVED SLIP COUPLING OVERSPEED PROTECTION DEVICE
...TO PREVENT DAMAGE BY ACCIDENTAL OVERSPEEDING ON A WRONG RANGE

Available Ranges:
TYPE "UO", 5-RANGE TYPE
CATALOG NO. 303, 30-12,000 RPM
CATALOG NO. 314, 45-18,000 RPM
CATALOG NO. 322, 60-24,000 RPM
CATALOG NO. 346, 120-48,000 RPM
BULLETIN NO. 751

TYPE "UY", 3-RANGE TYPE
CATALOG NO. 630, 25-30,000 RPM
CATALOG NO. 640, 30-40,000 RPM
BULLETIN NO. 756

HERMAN H. STICHT CO., INC. 27 PARK PLACE, NEW YORK 7, N. Y.

For more details circle NED-91 F5 on enclosed inquiry slip

22.6% more air PER POWER DOLLAR

By actual test, DeVilbiss air compressors deliver as much as 22.6% more air per power dollar. Efficiency like this combined with great care in manufacture and assembly are reasons why a DeVilbiss compressor pays for itself out of power savings alone. Full range of pressure. Types available from ½ through 15 h.p. Write today for full details.

DEVILBISS
THE DEVILBISS COMPANY
Toledo, Ohio
Barrie, Ontario • London, England • Santa Clara, Calif.

For more details circle NED-92 F5 on enclosed inquiry slip

CM Lodestar®

ENTIRELY NEW... differently NEW

Built to serve you for its normal life without maintenance

Lodestar is the first truly "heavy duty" version of the small electric hoist. It will serve you without costly maintenance or interruptions in your work schedules.

FLEXIBLE LINK CHAIN

CAPACITIES: from ⅛ to 1 ton. Single and 3 phase. ¼ ton model weighs only 51 pounds.

PUSH BUTTON CONTROL

$149.50 and up

WRITE US: Or call your CM distributor for literature, prices and quick delivery from stock.

CHISHOLM-MOORE HOIST DIVISION
Columbus McKinnon Chain Corporation
Tonawanda, New York
Regional Offices: New York, Chicago, Cleveland
In Canada:
McKinnon Columbus Chain Limited, St. Catharines, Ontario

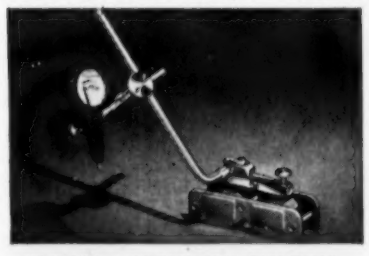
CM HOISTS AND CHAIN

For more details circle NED-93 F5 on enclosed inquiry slip

INDUSTRY'S EXTRA HAND

MAGNETIC HOLDERS AND ACCESSORIES

Fast, easy to use in any position, Erick Magna-Holders and dependable, precision-built accessories increase productivity, accuracy, and safety on 1001 industrial jobs . . . for layout, inspection, maintenance, and production operations. Powerful, lifetime magnetic holders adhere to curved or flat surfaces. Write for complete catalog describing other Magna-Holder styles and variety of labor-saving accessories.



SUPERIOR, LOW-COST DIAL INDICATOR
Meets most exacting requirements. Reads both sides. Unconditionally guaranteed to repeat within one-thousandth! Complete 360° freedom in all directions. Grips firmly to machine surfaces. Complete with holder and swivel adaptor. No. 200BC only $16.35

FLOOD LIGHT
Adjusts to any position. Ball socket joint. Takes up to 100 Watt standard bulbs. Includes 6 ft. heavy-duty cord. Complete with magnetic base. No. 675...only $8.50

MAGNA-HOLDER ONLY
Powerful Alnico magnetic base creates 50 lb. pull. Precision thumb screw adjustment. No. 200B . . . only $5.45

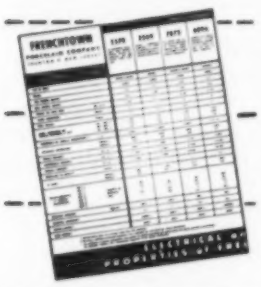
ORDER DIRECT

GENERAL SCIENTIFIC EQUIPMENT CO.
GENERAL SAFETY EQUIPMENT
2701 W. HUNTINGDON ST., PHILADELPHIA 32, PA.
SAFETY EQUIPMENT FOR EVERY HAZARD
OPEN ACCOUNTS INVITED

For more details circle NED-94 F5 on enclosed inquiry slip

engineered ceramics?

IF YOU ARE LOOKING for a supply source capable of providing high-performance materials that give you resistance to high temperatures and low thermal expansion; excellent mechanical strength and wear resistance; superior dielectric strength and both high and low frequencies—



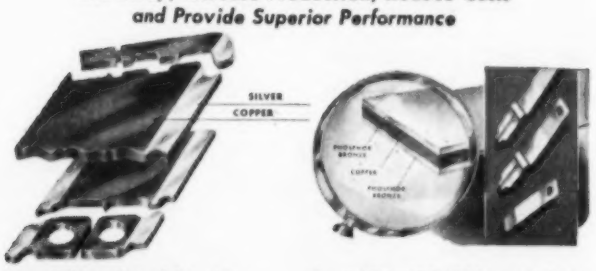
A GOOD SOLUTION to your problem is to check with Frenchtown. Asone of America's leaders in engineered ceramics for over 40 years, we are in a position to serve you in three ways: (1) providing research facilities for product improvement through *engineered* ceramics, (2) assisting in design and development work, (3) producing required parts and components in any quantity, to your most exacting specifications. Want to know more? Write for literature.

frenchtown PORCELAIN COMPANY
97 Muirhead Avenue • Trenton 9, New Jersey

For more details circle NED-95 F5 on enclosed inquiry slip

HERE'S HOW GENERAL PLATE COMPOSITE METALS

Cut Scrap, Increase Production, Reduce Costs and Provide Superior Performance



General Plate reduces fabrication and assembly costs of electrical switch contacts.

General Plate BRONCO provides higher electrical conductivity without increasing cross-sectional area of spring blades.*

General Plate Composite Metals are improving performance and cutting costs for manufacturers of many types of products.

Made by metallurgically bonding one metal to another, they are available in sheet, strip, tubing or wire in various widths, thicknesses and diameters.

Composite base metals provide a new group of engineering material with properties not available in solid metals. Their use frequently results in lower production costs as compared to solid metals.

In many applications further economy results when General Plate supplies fabricated parts ready for assembly into your product. General Plate makes an infinite variety of fabricated parts, such as electrical contacts, collector rings and TRUFLEX® Thermostat Metal elements to customers' exact specifications.

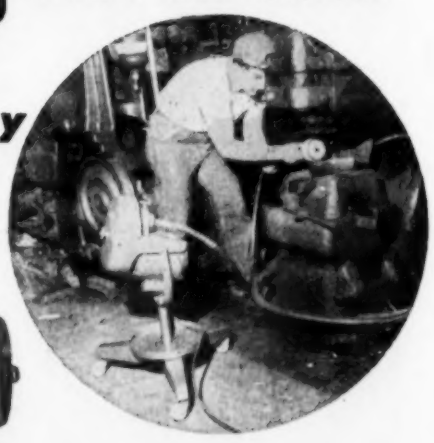
*Trademark

METALS & CONTROLS CORPORATION
GENERAL PLATE DIVISION
86 Forest Street, Attleboro, Massachusetts

For more details circle NED-96 F5 on enclosed inquiry slip

STOW flexible shaft machines

your best buy because they serve your customers better



Versatile . . . choice of operating speeds . . . specially designed to provide *highest efficiency!* Constant speed and other variable speed models also available.

For over 75 years, STOW FLEXIBLE SHAFT MACHINES have been famous for long trouble-free performance.

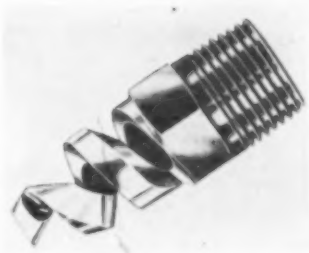
STOW

Don't delay—write *today* for your free copy of CATALOG #51.

STOW MANUFACTURING CO. 26 Shear St., Binghamton, N.Y.

For more details circle NED-97 F5 on enclosed inquiry slip

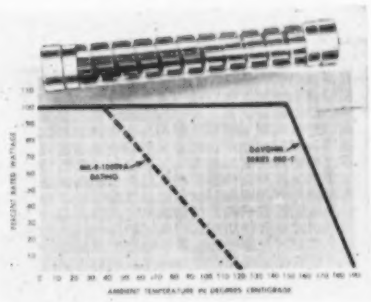
FOG NOZZLES have 90-degree spray pattern



Designed for fixed fire protection and other industrial applications, Tu-Cone N series fog nozzles employ two spiral turns to produce an inner and outer cone which results in uniform coverage over a 90-degree conical pattern. They resist clogging. Five models with flow rates from 5 to 50 gpm are available, all with ½-in. male pipe thread and 2½-in. overall length. They are made of brass or type 416 or 303 stainless steels. Made by **Bete Fog Nozzle, Inc.**, 305 Wells St., Greenfield, Mass.

For more details circle NED-98 F5 on enclosed inquiry slip

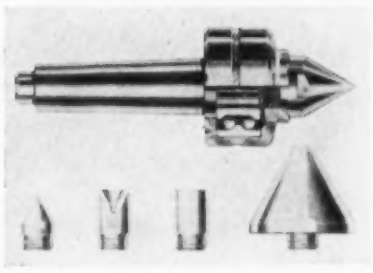
FILM TYPE RESISTORS ½, 1 and 2-w units are available



Usable at 150° C at full rated power, Davohm series 850-T resistors will derate linearly to zero at 190° C. Temperature coefficient is below +400 ppm/°C, is always positive in value and is independent of resistance value. Hermetically sealed resistors offer excellent moisture resistance and load life stability. Voltage coefficient is below 0.0005-per cent per volt. They are available in ½, 1 and 2-w ratings. Made by **Daven Co.**, Dept. RK, 191 Central Ave., Newark 4, N. J.

For more details circle NED-99 F5 on enclosed inquiry slip

INTERCHANGEABLE POINTS for shank type ball bearing centers



Group of interchangeable points for Red-E shank type, antifriction ball bearing centers have ground threads to match those of the head. Points available are standard male, standard female, standard round blank of soft tool steel and bull nose. Sizes range from ½ to 3 in. diameter. Male, female and bull nose points are made of hardened alloy steel. Special male, female and round blank points can be made to specification. Made by **Ready Tool Co.**, 554-D Iranistan Ave., Bridgeport 5, Conn.

For more details circle NED-100 F5 on enclosed inquiry slip

it costs you LESS

TO HANDLE SMALL METAL PARTS WITH A MAGNETOOL!

The amazing new hand Magnetool performs a variety of cost-saving operations never before possible! Instant pick-up and release of small parts! Separates steel parts from non-ferrous metals . . . removes steel particles from food, textiles, and chemicals . . . speeds handling of heat treated material and simplifies pick-ups of extremely hot or cold parts. There are many ways you can cut handling costs with Magnetools! Alnico Permanent Magnet—no batteries—lasts indefinitely. *Write today for literature on the complete line of Magnetools.*

MAGNETOOL Div., Multifinish Mfg. Co.
26341 W. Eight Mile Rd., Dept. 457
Detroit 19, Michigan

Model 74 8-9 lbs. capacity $75.00

Model 72 4-5 lbs. capacity $38.00 Pat Pend.

Model 71 2-3 lbs. capacity $19.75

MAGNETOOL DIVISION OF MULTIFINISH MFG. CO.
Manufacturers of Magnetic Tools Rotary Floor Sweepers, Tank Rotaries

For more details circle NED-101 F5 on enclosed inquiry slip

SHADOGRAPH gives you faster, precision weighing

Shado-edge indication is projected by a beam of light—read it from any angle without danger of parralax. Always a true and fast reading—short lever fall and adjustable damping device brings indicator to rest quickly.

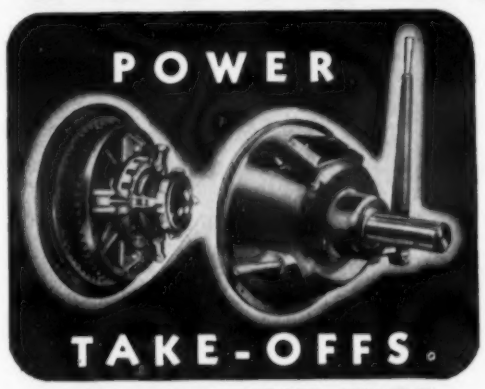
Model 4104 SHADOGRAPH Scales are available in capacities from 4 oz. to 3 lbs., with sensitivities from 1/500 ounce, 50 milligrams, or one grain. Other models with greater capacities for every weighing use. Write for details.

Exact Weight Scales
Better quality control
Better cost control

THE EXACT WEIGHT SCALE COMPANY
930 W. Fifth Avenue, Columbus 8, Ohio
In Canada: P. O. Box 179, Station S, Toronto 18, Ont.

For more details circle NED-102 F5 on enclosed inquiry slip

ROCKFORD POWER TAKE-OFFS



A SIZE AND TYPE FOR EVERY USE

- SELF CONTAINED UNIT
- WIDE RANGE OF SIZES
- CONSERVATIVE RATING
- ROLLER BEARINGS
- FINE ADJUSTMENT
- ACCURATE BALANCE
- S.A.E. DIMENSIONS

* ROCKFORD POWER TAKE-OFFS are available in standard sizes ranging from 125 foot pounds to 2100 foot pounds torque. Clutch sizes range from 6½ to 18 in. double plate. These complete, self-contained units are suitable for heavy-duty gear-tooth application to current industrial gasoline and diesel engines.

Send for This Handy Bulletin
Shows typical installations of ROCKFORD CLUTCHES and POWER TAKE-OFFS. Contains diagrams of unique applications. Furnishes capacity tables, dimensions and complete specifications.

ROCKFORD CLUTCH DIVISION ROCKFORD, WISCONSIN
319 Catherine Street, Rockford, Illinois, U.S.A.

CLUTCHES

For more details circle NED-103 F5 on enclosed inquiry slip

New "PULL-GEAR" SPEED-REDUCING PULLEY

Increases Drill Press Capacity

NEW MODEL

Provides Correct Speed and Power to Drill Up to 1⅜" with ½ H.P. Motor

Amazing new internally geared speed reducer doubles drill press capacity. Greater power, greater efficiency, greater productivity.

Provides the correct speed and power for larger drilling, reaming, tapping and boring on light presses. Easily installed in five minutes. Adaptable to all type machines. Spindle speed range approx. 45 to 3000 RPM. Made in 3 motor shaft sizes: ½"-⅝"-¾". Write for literature.

Some Territories Open to Jobbers

THE PULL-GEAR CO.
25425 Mound Rd. Centerline, Mich.

WRITE FOR LITERATURE

For more details circle NED-104 F5 on enclosed inquiry slip

HOW TO CUT PIPING LAYOUT COSTS

Save Time, Material and Labor with NAYLOR Fabrication Service

By combining several fittings into one integral unit and eliminating numerous flanged joints, Naylor fabrications enable you to save money and obtain better performance on your piping layouts. All types of materials can be fabricated accurately to your specifications. Sizes range from 3" to 44" in diameter and wall thicknesses from 14 gauge to ⅜". Complete line of standard fittings for lightweight pipe also available.

For the complete story, write for Bulletin No. 525

NAYLOR PIPE

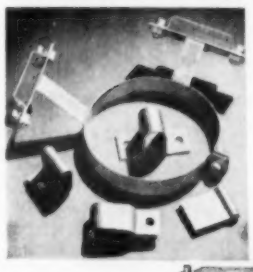
NAYLOR PIPE COMPANY

1247 East 92nd St., Chicago 19, Ill.

Eastern U.S. and Foreign Sales Office: 350 Madison Ave., New York 17, N.Y.

▲ For more details circle **NED-105 F5** on enclosed inquiry slip ▲

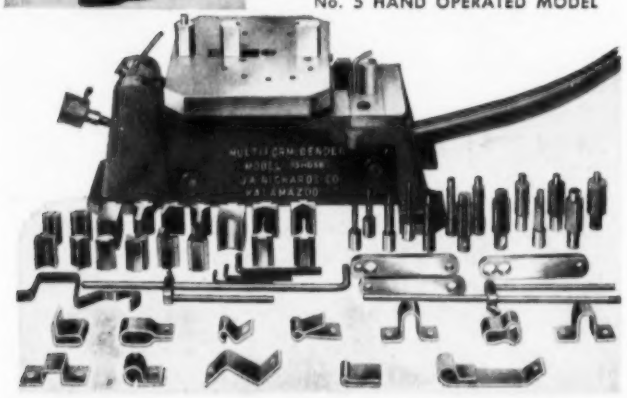
THE FAMOUS MULTIFORM BENDER CUTTER



Produces Without Special Tooling—Saves Die Costs Saves on Expensive Presses

This efficient machine is useful in all lines of trade, spring plants, radio and electrical equipment manufacturers. Complete with tooling, for bending material up to ⅛" x 1½".

No. 5 HAND OPERATED MODEL



AIR OPERATED MODELS AVAILABLE IN THIS AND LARGER SIZES

FIVE-IN-ONE-TOOL—ALSO LARGER MODELS

IT BENDS FLAT AND ROUND STOCK INTO ANY SHAPE, CUTS AND PUNCHES FLAT STOCK

J. A. RICHARDS CO. MYRTLE & PITCHER STS. KALAMAZOO, MICHIGAN

▲ For more details circle **NED-106 F5** on enclosed inquiry slip ▲

24 feet of boot

It's big . . . with a 36" O.D. and extended length of 24 feet. Made of synthetic rubber coated fabric, this boot protects the main plunger of the scrap hoist in an open-hearth mill. Inserted wire rings support each convolution, and these in turn are supported by a jack chain. Full length zipper permits quick installation without dismantling hoist. Big . . . or little . . . bring your boot problem to Chicago Rawhide engineers. They know how. Write today for full details.

CHICAGO Rawhide MFG. CO.
1301 Elston Ave., Chicago 22, Ill.
In Canada: Super Oil Seal Mfg. Co., Ltd., Hamilton, Ontario

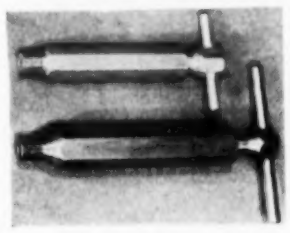
▲ For more details circle **NED-107 F5** on enclosed inquiry slip ▲

OUTDOOR INCINERATOR
offered in 2½ and 4-bu capacities

Burnable rubbish of any type is easily disposed of with this Iron Horse Combustionair outdoor incinerator. Constructed of stainless steel, this unit withstands both heat and corrosion. Rubbish is merely dumped loosely into incinerator, and lighted match is dropped in. Air-flame tube, shown in cut-away, creates column of heated combustion air to consume rubbish in 15 to 20 minutes without smoldering or excessive smoke. Made by **Rochester Can Co.**, Dept. N, 100 Greenleaf St., Rochester 9, N. Y.

▲ For more details circle **NED-108 F5** on enclosed inquiry slip ▲

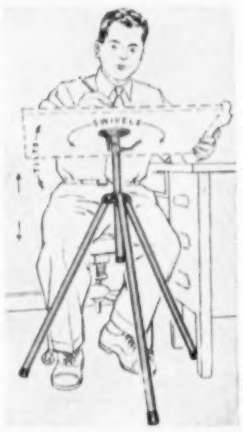
EXTENSION LUBRICATOR
for packing stuffing boxes



An extension lubricator for injecting lubricant as packing in pump shaft stuffing boxes is now available as stock item. Available in brass or cadmium-plated steel, accessory comes in overall lengths of 6⅜ and 8 7/16. Longer model with larger lubricant barrel is offered with either ¼-in.-18 or ⅜-in.-18 NPT thread connector. Made by **Rockwell Mfg. Co.**, Meter & Valve Div., Dept. NED, 400 N. Lexington Ave., Pittsburgh 8, Pa.

▲ For more details circle **NED-109 F5** on enclosed inquiry slip ▲

DRAWING STAND
makes any board a drawing table



Any drawing board attached to model 714 Safe-lock drawing stand converts it to a drawing table that will swivel, tilt and lock in any position with the turn of a lever. When locked, table will not slip or tilt accidentally since it is held securely by pair of gear-like serrated locking surfaces. Table is adjustable to standing or sitting height. Rigid aluminum alloy stand has rubber-tipped heavy gage legs. Screws are provided for mounting to any board. Made by **Arsco American, Inc.**, 3306 Edson Ave., New York 69, N. Y.

▲ For more details circle **NED-110 F5** on enclosed inquiry slip ▲

CHOOSE CHALLENGE . . .
and be precision sure!

CHALLENGE SURFACE PLATES

New! Clovis Black Granite Rated Class A. Surface accuracy guaranteed. 24 sizes.

Special Analysis Semi-Steel Fine grain. Precision ground or hand scraped.

STRAIGHT EDGES for lathe bed ways. PARALLEL STRAIGHT EDGES for inspection of alignment.

UNIVERSAL BOX ANGLES Parallel to within .00025-inch.

V-BLOCKS V accuracy of .0005-inch.

ANGLE PLATES In 22 sizes for clamping & holding work.

BOX PARALLELS In every size for every use.

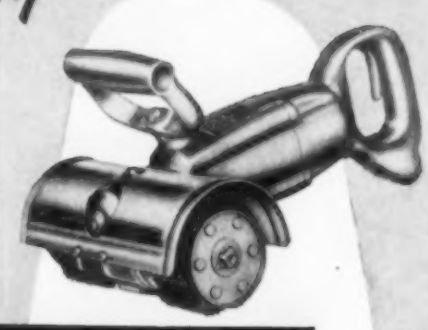
782

Challenge®

THE CHALLENGE MACHINERY COMPANY
Office, Factories and Show Room: GRAND HAVEN, MICHIGAN
DEALERS IN ALL PRINCIPAL CITIES

▲ For more details circle **NED-111 F5** on enclosed inquiry slip ▲

Chip Away



SCALE
RUST
PAINT

AURAND
CLEANING TOOLS
ELECTRIC OR PNEUMATIC MODELS

Surfaces are cleaned quickly with AURAND on the job. Hardened steel cutters zip away stubborn accumulations from iron, steel, brick, concrete. Adjustable depth shoe protects surface . . . assures uniform cleaning. No special skill required. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

Write Dept. 14 for complete details

AURAND MFG. & EQUIPMENT CO.
1210 Ellis St., Cincinnati 23, Ohio

▲ For more details circle **NED-112 F5** on enclosed inquiry slip ▲

HERC-ALLOY
The Original Alloy Chain

● An all-purpose chain for use where strength and safety are primary considerations.

● Sold in running lengths, slings assembled to customers' specifications and other special assemblies.

● Write for Bulletin 100 covering Herc-Alloy Sling Chains, including helpful information on their care, use and inspection.

● CM also produces welded chain of all types including stainless steel and bronze.

CM HOISTS AND CHAIN

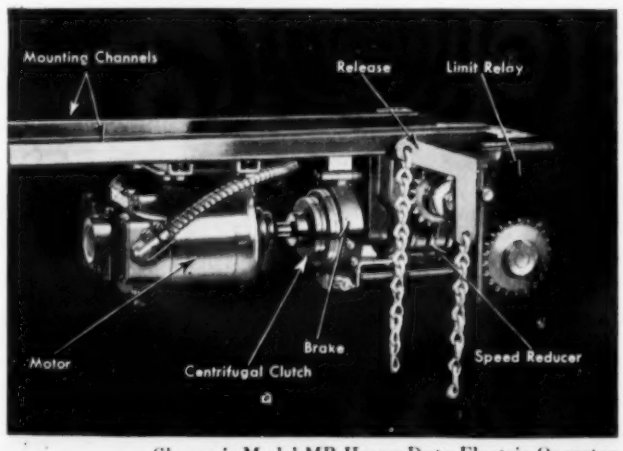
COLUMBUS McKINNON CHAIN CORP.
TONAWANDA, NEW YORK
Regional Offices:
NEW YORK • CHICAGO • CLEVELAND
In Canada: McKinnon Columbus Chain Ltd., St. Catharines, Ont.

▲ For more details circle **NED-113 F5** on enclosed inquiry slip ▲

BARBER COLMAN

Barcol®
Door Operators

save heat, save man-hours, and speed plant traffic



Shown is Model MR Heavy Duty Electric Operator for large commercial and industrial doors. Model L gives same rugged dependable service for smaller doors at considerably lower cost—prices start at $240, f.o.b. Rockford. Sold, installed, and guaranteed by your "Barcol" distributor—listed under "Doors" in phone book. Ask him for literature and prices or write.

BARBER-COLMAN COMPANY, DEPT. S56, ROCKFORD, ILLINOIS

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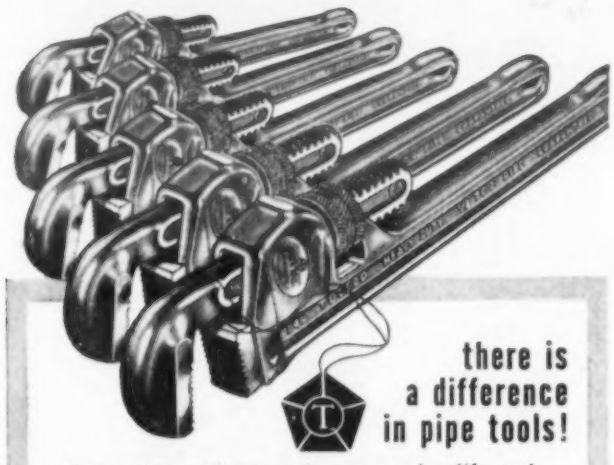
ASK THE MAINTENANCE MAN



there is a difference in pipe tools!

Good pipe tools mean longer service life and greater satisfaction on every job. Toledo unconditionally guarantees every pipe wrench it makes . . . your assurance of maximum service at lowest cost. Single spring action gives quicker, easier setting on pipe surfaces. Replaceable jaws in every size from 6" to 48". Your supplier knows and stocks Toledo pipe wrenches, pipe cutters, pipe threaders and power machines. Next time try Toledo.

BUILDERS OF THE WORLD'S FINEST PIPE TOOLS
TOLEDO
PIPE THREADERS • PIPE WRENCHES • PIPE MACHINES

THE TOLEDO PIPE THREADING MACHINE CO. TOLEDO 4, OHIO

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BREEZE BUILDS BETTER BELLOWS

Breeze bellows are job-engineered for tough applications where ordinary formed bellows cannot meet the requirements. Custom-building permits more convolutions per inch for controlled flexibility; extra strength is *precision-welded* into each diaphragm. Spring rate is exact.

Where necessary, Breeze can solve difficult vibration problems through special design, using plate-to-plate construction of proper metal and varying thickness.

Breeze *valve-sealing bellows* provide a tight packless seal with required flexibility. Breeze *instrument bellows* meet pressure sensing needs from vacuum to 2000 psi. As *expansion joints* and *flexible connectors* they can withstand temperatures to 1400° F. All are job-engineered.

We can also provide stainless steel *formed* bellows for operations where custom-welded bellows are not required. Our engineers invite your inquiries.

BREEZE CORPORATIONS, INC.
700 Liberty Avenue, Union, New Jersey

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This FREE booklet will show you a system of time-saving in materials handling

• The Vince Basnik System of VER-T-RACKS eliminates lost motion, saves waste floor space, recovers lost man hours, speeds production and cuts material damage. These remarkably adaptable VER-T-RACKS can be put to dozens of uses; they are mobile, handy and versatile; they adjust easily to any need.

• This FREE booklet shows the VER-T-RACK in action; it demonstrates time-saving tips in materials handling. See just how easy it is to trim costs by utilizing the efficiency of VER-T-RACKS. Write for YOUR copy today!

THE VINCE BASNIK COMPANY
2020 CENTER ST., CLEVELAND 13, O.

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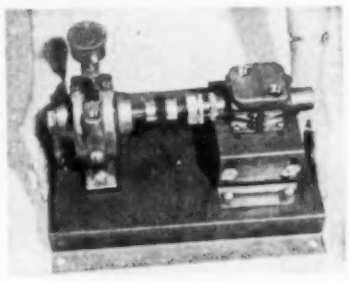
PORTABLE ELECTRIC VIBRATOR
speeds unloading of bins and hoppers

Completely self-contained, model RC-30 - LSRR portable electric vibrator is especially suitable for speeding the unloading of covered hopper railroad cars. It can also be adapted for use on bins, hoppers and chutes to speed the flow of bulk materials. This totally-enclosed unit is unaffected by dust or moisture. It is available for operation on 110 to 550 v ac. Working frequency is 3600 impulses per second. Made by **Cleveland Vibrator Co.,** 2744 Clinton Ave. W., Cleveland 13, O.

▲ For more details circle **NED-118 F5** on enclosed inquiry slip ▲

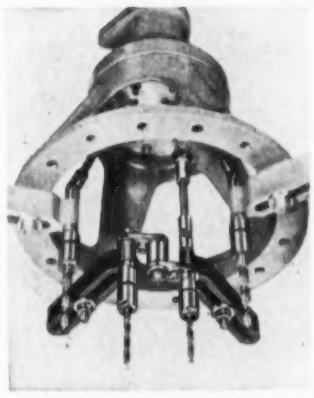
EXPLOSIONPROOF PUMP
driven by rotary air motor



Operating on compressed air in range of 40 to 100 psi, this positive displacement, stainless steel All-Chem pump will handle corrosive or hazardous materials safely. Air motor, which can be reversible, is manually adjustable so that pumping speed is easily controlled. Pump handles nonabrasive fluids at flow rates to 10 gpm at pressures up to 100 psi. Made by **Eco Engineering Co.,** Dept. NED, 12 New York Ave., Newark 1, N. J.

▲ For more details circle **NED-119 F5** on enclosed inquiry slip ▲

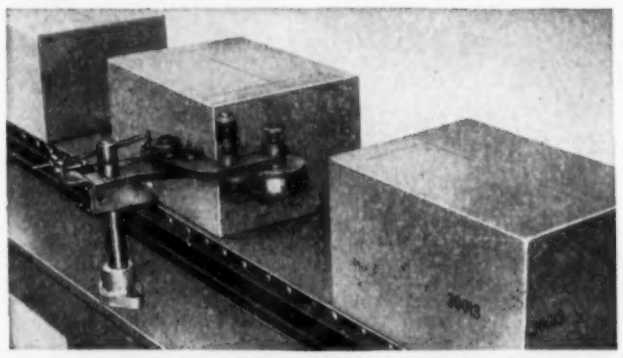
TWIN SPINDLE ATTACHMENT
for use on multiple drilling heads



Twin spindle attachment for use on the Commander Multi - Drill permits driving two collet type spindles from any one of the spindles. In effect it adds an extra spindle for each of the Multi-Drill's standard six or eight spindles. Direct gear train permits setting the two spindle centers as close as ⅞-in. and a maximum of 3 in. wide. Maximum capacity of the attachment is ¼-in. hole in steel. Made by **Commander Mfg. Co.,** 4221 W. Kinzie St., Chicago 24, Ill.

▲ For more details circle **NED-120 F5** on enclosed inquiry slip ▲

Now...mark all 4 sides of cases automatically...*in a single pass*



Twin-action Gottscho ROLACODER Markers attach to conveyor or case-sealer

New friction-driven marking attachments enable you to mark codes or lot numbers on 2 or 4 panels of corrugated cases as they are sealed or conveyed . . . without requiring cases to be turned. ROLACODER *500* marker imprints front and one side panel, ROLACODER *200* unit imprints rear and other side panel — mounted in tandem they mark all 4 sides simultaneously. ROLACODER markers use quick-change rubber type, hold 8-hour ink supply; are designed for easy do-it-yourself installation.

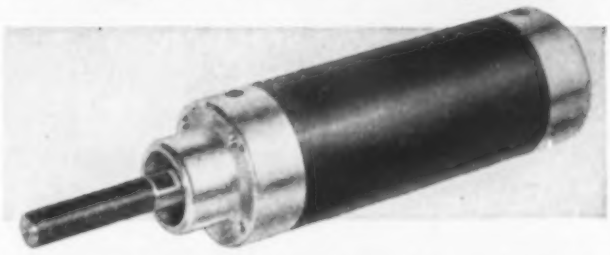
Write for descriptive literature

Gottscho **ADOLPH GOTTSCHO, INC.** Dept. N, Hillside 5, N. J.
Automatic CODING, MARKING, IMPRINTING MACHINES

In Canada: RICHARDSON AGENCIES, LTD., Toronto & Montreal

▲ For more details circle **NED-121 F5** on enclosed inquiry slip ▲

NEW NP Power Drive Cylinder



. . . has all the "most wanted" design features

No other cylinder offers so many vital features . . . including: compact, streamlined design; lightweight aluminum alloy and steel construction with *no* sacrifice of strength; sealed-in lubrication which eliminates need for external line lubricators; optional adjustable cushioning (can be added any time). Operates with air, water or oil without interchanging or adding parts.

SPECIFICATIONS — Ratings: air — 200 psi; water or oil — 500 psi. Bore diameters: 1½", 2¼", 3", 4". Mountings: foot, flange, pivot, clevis, trunion.

For data sheets illustrating many other features, write: Industrial Actuators and Controls Division.

NATIONAL PNEUMATIC CO., INC. AND **HOLTZER-CABOT** DIVISIONS
125 Amory St., Boston 19, Mass.
Sales Service Representatives in Principal Cities throughout the World
Designers and manufacturers of mechanical, pneumatic, hydraulic, electric and electronic equipment and systems

▲ For more details circle **NED-122 F5** on enclosed inquiry slip ▲

Here's how we
SAVE ON RAILS
BUY "GUARANTEED RELAYERS"

Handle more cars better — spend less to install and maintain with Relayers from Foster. "Open-stock" shipments from Foster warehouses, all sections 12# thru 175#—plus Switch Materials and Track items.

Send catalogs ☐ *Rails* ☐ *Track Equipment*
☐ *Send Free 'Track Maintenance' Book* NE6

RAILS - TRACK EQUIPMENT - PIPE - PIPE FABRICATION - PILING

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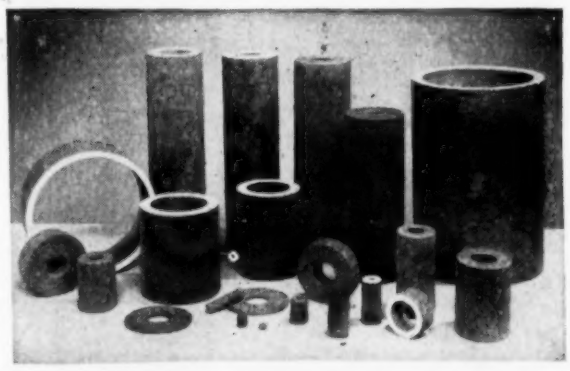

Easy way to effective filtration

Just specify Cuno's MICRO-KLEAN. As this photo shows, there's a MICRO-KLEAN filter to meet every filtration need.

You can get MICRO-KLEAN filters for built-in or external installation, in densities of 10, 25, and 50 microns; flow rates range from ½ to 900 gallons per minute. And your customers will like MICRO-KLEAN's graduated density, which gives twice the effective life of an ordinary filter cartridge, thereby cutting cartridge replacement costs in half.

Let Cuno's engineers work with you on your filtration problems—without obligation on your part. We'll show you how to get the most filtration for the least money. Cuno Engineering Corp., Dept. 7013M. Meriden, Conn. M.3.13

REMEMBER . . . IF YOU CAN PUMP IT, CUNO CAN FILTER IT

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HAMILTON CASTERS

FOR

Every Industrial Use!

The Hamilton caster line is extensive and exceptionally complete! Hamilton manufactures hundreds of styles and sizes, including swivel and rigid casters of forged steel, plate steel, cast steel, pressed steel and semi-steel. Single and double-wheel models. Wide range of capacities—up to 2,500 lbs. per caster.

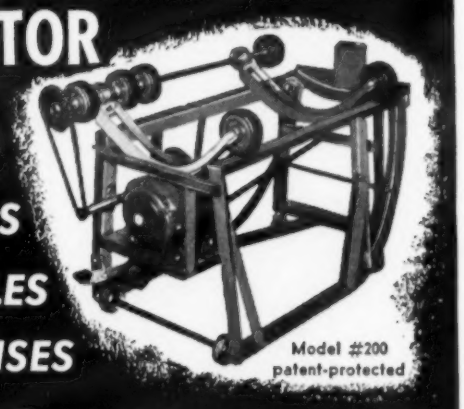
Wheels available include steel, semi-steel, molded-on rubber-tired wheels, renewable rubber tires, full pneumatics, semi-pneumatics, molded plastic and composition rubber wheels. If you use industrial casters—whatever the application, whatever the quantity—get a quotation from Hamilton. Write today and tell us your requirements.

SEND FOR YOUR COPY OF THE HAMILTON CASTER & WHEEL CATALOG

Hamilton
CASTER & MFG. COMPANY
1659 Dixie Highway, Hamilton, Ohio

▲ For more details circle NED-125 F5 on enclosed inquiry slip ▲

inexpensive MORSE portable ROTATOR



- *MIXES*
- *BLENDS*
- *TUMBLES*
- *CLEANSES*

In 30 to 55 gal. drums, 1 to 5 gal. cans at rotating speeds 10 to 40 rpm. The four drive-wheels have Neoprene treads, resistant to paint and oil. The idler wheels have Torrington Needle Bearings for smoother operation. Easily loaded—frame has retractable casters. Various speeds are secured through chain sprocket reduction. Morse Model #200 Rotator weighs 115 lb. Write for Bulletin 348 and free folder showing complete Morse line or Drum and Barrel Handling Equipment.

MORSE *MANUFACTURING CO.* INC.
756 West Manlius St. East Syracuse, N. Y.

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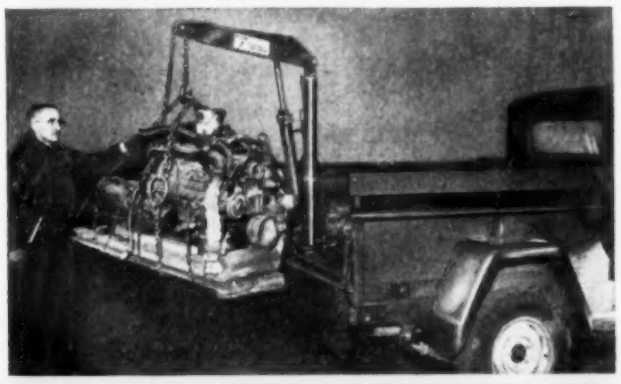
Handle Heavy Materials Easily • Safely • Quickly • with RUGER CRANES

These Ruger Hydraulic Truck-mounted cranes will move anything you can hang on a hook — always a one man crane operation. Capacities from ½ to 2 tons.



SUBSTITUTE FOR AN ELEPHANT®

RUGER CRANES

619 West Fourth St.
UHRICHSVILLE, OHIO

SEND FOR 1955 CATALOG
Completely illustrated with specifications for each model. Mobile Floor cranes also available. Capacities ½ to 3 tons. Write now for your copy.

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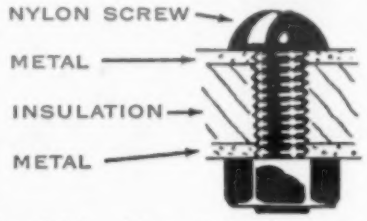
NYLON SCREWS & NUTS with 6-32, 8-32 and 10-32 threads

Particularly suited for use in electrical mechanisms and components, black nylon screws and nuts are nonmagnetic, noncorroding and lightweight. Both internal and external threads are smooth, and outside surfaces are glossy because of molded construction. They withstand weathering, temperature to 250° F and are unaffected by ultraviolet. Ten stock sizes are available with 6-32, 8-32 and 10-32 threads. Made by **Weckesser Co.**, 5255 N. Avondale Ave., Chicago 30, Ill.



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POWER FLOOR SWEEPER cleans up to 45,000 sq ft per hour

Offered in three sizes, Industrial Special power sweeper will clean up to 45,000 sq ft of floor area per hour. It has power reverse, 16 brushes on the main broom and is powered by a 3.6-hp Clinton air-cooled gasoline engine. Added features are heavy duty semipneumatic front casters, and main broom and side brush height controls on steering bar. Made by **Modern Power Sweeper Co.**, 736-8 N. McKeever Ave., Azusa, Calif.

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FLANGE-MOUNTED BEARINGS for shafts from ½ to 1¼ in.

F100 flange-mounted, self-aligning bearings, available in shaft sizes ranging from ½ to 1¼ in., are designed for machine frame applications such as farm machinery, conveyors, power transmission, blower and fan installations. A labyrinth composition seal retains lubricant and excludes foreign material. Bearings are recommended for medium loads and speeds ranging up to about 5000 rpm. Assembly is mounted in a frame opening of the proper size and is attached by three bolts. Made by **Nice Ball Bearing Co.**, 2926 Hunting Park Ave., Philadelphia 40, Pa.

▲ For more details circle NED-130 F5 on enclosed inquiry slip ▲

MILLIONS OF OPERATIONS WITHOUT MEASURABLE WEAR

NEW DENISON
¾" Solenoid Controlled-Pilot Operated Subplate Type 4-Way Valve.
For operating pressures up to 3000 psi.

GET FULL FACTS. Specifications and description are in bulletins VD-7 and VD-8.

THE
DENISON ENGINEERING COMPANY
1192 Dublin Road, Columbus 16, Ohio

DENISON HydrOILics

PUMPS • MOTORS • CONTROLS • PRESSES

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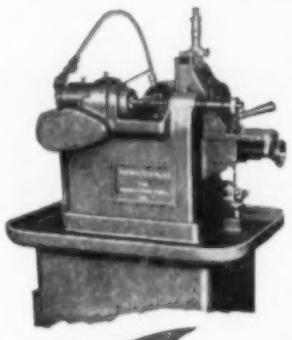
5418

PRECISION GEARS ON RELENTLESS PRODUCTION SCHEDULES



The feature of *independent* selection of speed, feed and indexing, which speeds machine set-up and provides a means for matching cutting speed and work feed to the material being machined, together with a "reserve of accuracy" built into the machine, has placed the Hamilton Precision Small Gear Hobber high in perference in the precision instrument field.

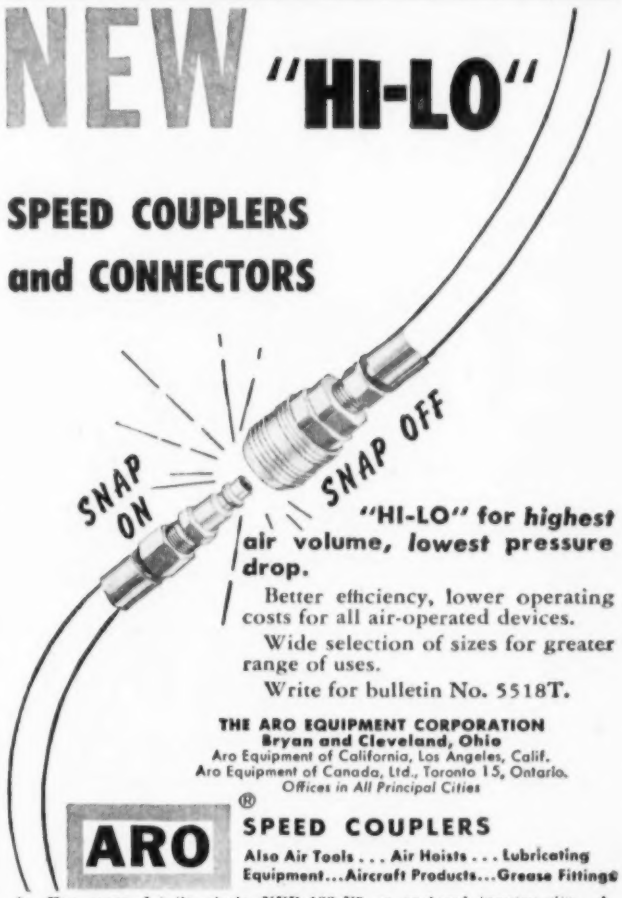
GET THE FACTS!
WRITE FOR FREE BULLETIN 5418
ADDRESS: THE HAMILTON TOOL COMPANY
901 HANOVER STREET, HAMILTON, OHIO

IT'S A *Hamilton Tool*
USE IT WITH CONFIDENCE

▲ For more details circle NED-132 F5 on enclosed inquiry slip ▲

NEW "HI-LO"

SPEED COUPLERS and CONNECTORS



"HI-LO" for *highest* air volume, *lowest* pressure drop.

Better efficiency, lower operating costs for all air-operated devices.

Wide selection of sizes for greater range of uses.

Write for bulletin No. 5518T.

THE ARO EQUIPMENT CORPORATION
Bryan and Cleveland, Ohio
Aro Equipment of California, Los Angeles, Calif.
Aro Equipment of Canada, Ltd., Toronto 15, Ontario.
Offices in All Principal Cities

ARO® SPEED COUPLERS
Also Air Tools . . . Air Hoists . . . Lubricating Equipment . . . Aircraft Products . . . Grease Fittings

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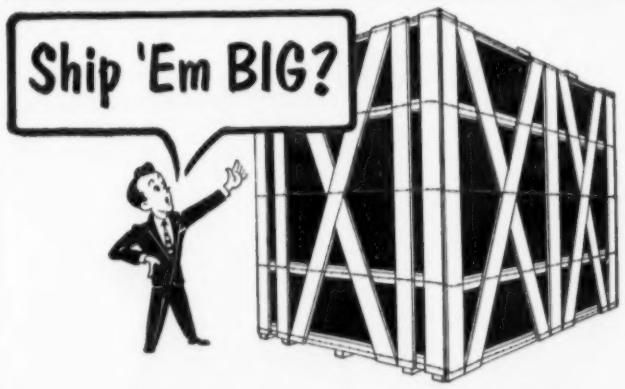
Ship 'Em BIG?



General-engineered Wirebounds provide engineered protection and save big money, too!

The trend's to General-engineered wirebound boxes for shipping items weighing 500, 1,000, 5,000, even 10,000 pounds. Big products, heavy or not, pose protection problems regularly solved successfully by General's experienced testing and design engineers. And engineered wirebounds go together fast, often cut packing costs in half. To have a General man call, write direct.

SEND FOR FREE "Heavy-Duty" illustrated booklet. Shows examples of big product packaging. Gives weights and costs saved.

General Box
1849 Miner St., Des Plaines, Ill.

▲ For more details circle NED-134 F5 on enclosed inquiry slip ▲

NOW! BUILD YOUR OWN Pallet Racks, Rails and Shelving...with

Nu-Rail SLIP-ON FITTINGS

AN ENTIRELY NEW METHOD OF FITTING PIPE

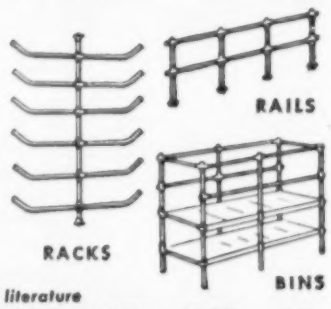
NO WELDING! USE ALL PARTS OVER AND OVER AGAIN!

USE ANY I.P.S. PIPE OR TUBING . . .
NO PIPE CUTTING . . . NO WELDING

Build them when and where you need them

Just a few examples of Nu-Rail versatility! If it's made of pipe . . . you can make it BETTER, FASTER AND FOR LESS . . . with Nu-Rail!

Distributed coast to coast.



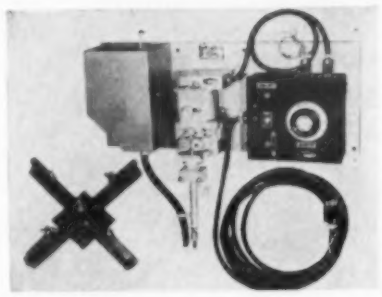
SAVE MONEY, too!

Write for literature

THE HOLLAENDER MFG. CO.
3840 Spring Grove Ave., CINCINNATI 23, OHIO

For more details circle NED-135 F5 on enclosed inquiry slip

AUTOMATIC WELDING HEAD
feeds wire for continuous welding



Simplified controls, wire feed and current pickup assembly, flux hopper and wire reel comprise this automatic welding head for use with the constant-voltage Powromatic electric welder. It provides for automatic welding with wire sizes ranging from 0.035 to ¼-in. Capacity of the flux hopper is 25 lb, and the adjustable wire reel will handle coils of 12 to 16-in. ID and from 2½ to 4 in. wide. Since a constant voltage type of welder is used with head, welding current automatically adjusts to correct value for the selected wire feed speed. Made by **Hobart Bros. Co.**, Dept. 205-h, Troy, O.

For more details circle NED-137 F5 on enclosed inquiry slip

WIRE STRIPPER
for various sizes, types of wire

Up to ⅞-in. of wire can be stripped clean and bare of insulation by a light squeeze on the handles of the Stripmaster hand-type wire stripper. Wide variety of sizes and types of wire are stripped in an automatic single-squeeze operation. Tool weighs 10 oz and is available in sizes for all wire gages from 8 to 26. Made by **Ideal Industries, Inc.**, 1032 Park Ave., Sycamore, Ill.

For more details circle NED-138 F5 on enclosed inquiry slip

BALL DUCT JOINTS
prefabricated sheet metal units

Available in eight pipe sizes ranging from 3 to 12-in. diameters, line of prefabricated sheet metal flexible ball joints is designed for duct systems. These versatile units are adaptable for use in exhaust system for dust and noxious fumes and in blower systems for air conditioning and ventilating. The 7 and 9-in. sizes provide a total arc of 45 degrees and other sizes permit total of 55 degrees deflection. All surfaces are electro-zinc plated. Made by **Spincraft Inc.**, Dept. NED, 4132 W. State St., Milwaukee, Wis.

For more details circle NED-139 F5 on enclosed inquiry slip

VANTON'S External Bearing

X-B PUMP

Without stuffing box, gaskets or valves!

The Vanton corrosion resistant "flex-i-liner" self priming rotary type plastic pump is available in a new design that permanently protects all bearings from fumes or chemical attack.

Low maintenance is assured since shaft bearings are external and rotor assembly is stainless steel. The only wearing part is the quickly replaceable low cost flexible liner.

Capacities range from fractional to 5 gpm with 0-50 psi discharge pressures . . . vacuum to 26" Hg. A wide selection of plastic and rubber body blocks and "flex-i-liners" makes the XB ideal for handling corrosive liquids, gases, viscous fluids or abrasive slurries.

VANTON PUMP & EQUIPMENT CORP.
Division of Cooper Alloy Corporation • HILLSIDE, N. J.

For more details circle NED-141 F5 on enclosed inquiry slip

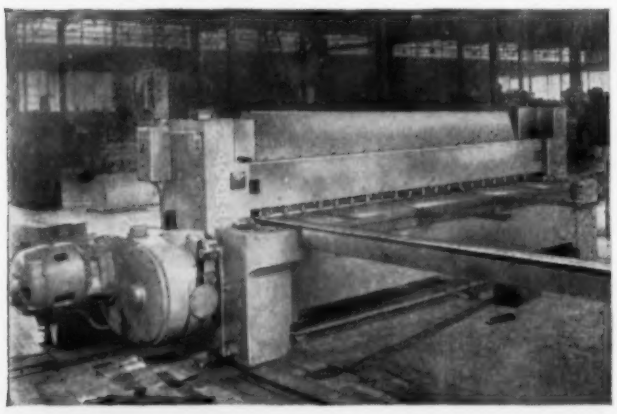
A case of SHEAR necessity

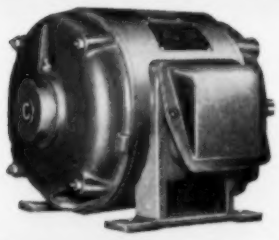
HERE'S HOW A Century MOTOR IS **Performance-Rated°** TO BRING OUT THE BEST IN THIS MASSIVE MACHINE

This particular shock load required the speed-torque characteristics of NEMA Design "B" in a 10 H.P. polyphase motor. Century provided it in a protected, drip proof frame, with compact direct flange mounting and the terminal box out of the way at the bottom of the motor.

The owner of this shear says: "Say anything you want about it. It's giving me everything I expected . . . and more!"

Century Performance-Rating makes it possible to select from Century's complete line precisely the right motor size, speed, torque and frame to bring out the best performance in your equipment. Specify Century motors on your new equipment... or as replacements on your present machines. Call your nearest Century District Office or Authorized Century Distributor.





Machine Tool Motors . . . AC or DC . . . drip proof, dust proof or explosion proof frames.

CENTURY ELECTRIC COMPANY

13A 1806 PINE STREET • ST. LOUIS 3, MISSOURI

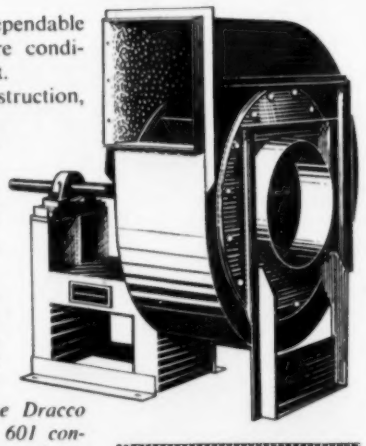
For more details circle NED-136 F5 on enclosed inquiry slip

dracco industrial fans

FOR BETTER AIR HANDLING

Dracco Fans assure dependable operation, withstand severe conditions, have low lifetime cost.

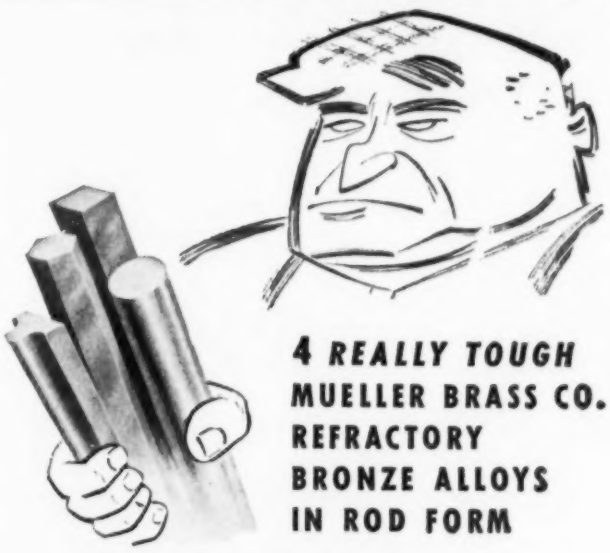
Heavy gauge steel construction, welded and vibration-free. Precisely balanced. No castings to crack. Accurate shaft. Rotation and discharge adjustable. Wide range of sizes: volumes from 500-46,000 CFM "Performance Proved" by 15 years' service with Dracco Dust Control systems. For details, contact:



Write for 40-page Dracco Fan Bulletin No. 601 containing complete performance data and specifications.

DRACCO CORPORATION
4055 EAST 116th STREET
CLEVELAND 5, OHIO

For more details circle NED-140 F5 on enclosed inquiry slip



4 REALLY TOUGH MUELLER BRASS CO. REFRACTORY BRONZE ALLOYS IN ROD FORM

"TUF STUF" ALUMINUM BRONZE
"600" SERIES BEARING BRONZE
MANGANESE BRONZE
ALUMINUM SILICON BRONZE

These four Mueller Brass Co. alloys have been specifically formulated to meet the demands of applications where manufactured parts must stand up under the most adverse operating conditions. As specialists in brass and bronze alloys, the Mueller Brass Co. can offer you the exact alloy best suited to meet the requirements of any application problem. Write us today for details.

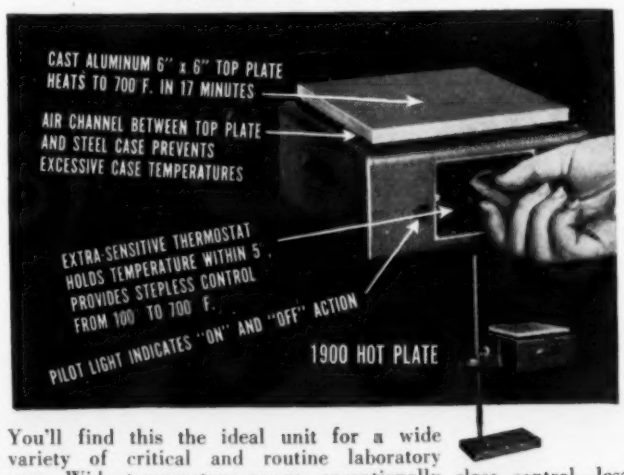
155

MUELLER BRASS CO. PORT HURON 27, MICHIGAN

For more details circle NED-142 F5 on enclosed inquiry slip

VERSATILE, HANDY HOT PLATE

for both exacting requirements and general heating in Laboratories and Plants



You'll find this the ideal unit for a wide variety of critical and routine laboratory uses. Wide temperature range, exceptionally close control—less than 5° F variation. Completely variable control over full temperature range. Compact, convenient — plugs into 110 V., 50/60 Cy. Only $19.75. Write for literature and nearest dealer's name.

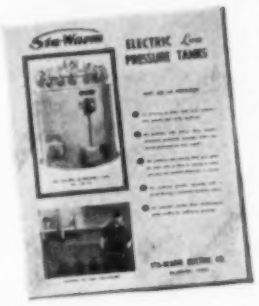
TEMCO® HOT PLATES & FURNACES

THERMO ELECTRIC MFG., CO., 484 HUFF ST., DUBUQUE, IOWA

For more details circle NED-143 F5 on enclosed inquiry slip

DON'T TRY TO BUILD YOUR OWN COMPOUND MELTING TANKS!

When a Sta-Warm compound melting tank or dispenser is uncrated at your plant it is ready to go to work immediately in your production line. *You may be sure* of its efficiency, its rated capacity, its ability to produce melted material steadily, dependably and at the lowest operating cost.



Typical Sta-Warm Product Bulletin. Inquire for the type of unit you need, or outline your problem for Sta-Warm recommendations.

Sta-Warm offers you its broad experience in designing and building just the unit you need, with all of the special features your set-up requires.

You can save yourself time, trouble and experimentation by having Sta-Warm build your compound melting tank for you.

Inquire for detailed product literature today.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

For more details circle NED-144 F5 on enclosed inquiry slip

IN A HURRY?

WE CAN SHIP TODAY

We can ship from stock immediately, in a matter of minutes if necessary, from an inventory of nearly a thousand sizes, materials, and grades of precision balls—chrome alloy, stainless, Monel, bronze, aluminum, nylon, phenolic, glass. No need for delay—call Hartford.

Hartford STEEL BALL CO., INC.
HARTFORD, CONNECTICUT
Tel. Hartford ADams 3-1251

1HS55

For more details circle NED-145 F5 on enclosed inquiry slip

Precoat Filtration Saves Additives

Delpark-OLSON SUPERFLOW FILTER

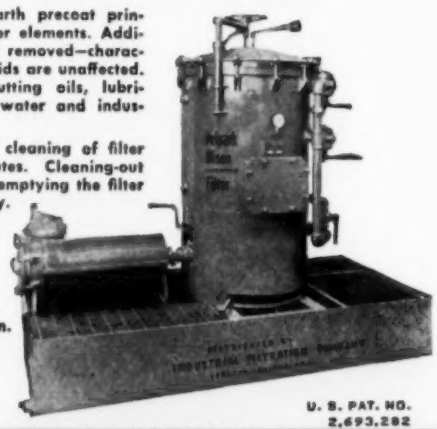
FOR ALL LIQUIDS

Uses diatomaceous earth precoat principle with tubular filter elements. Additives in fluids are not removed—characteristics of original fluids are unaffected. Ideal for coolant, cutting oils, lubricants, cooling tower water and industrial solvents, etc.

Completely automatic cleaning of filter done in 1 to 3 minutes. Cleaning-out process done without emptying the filter . . . is fast, clean, easy.

Capacities to 175 g.p.m.

Write for more complete information.



U. S. PAT. NO. 2,693,282

INDUSTRIAL FILTRATION COMPANY
14 INDUSTRIAL AVENUE · LEBANON, INDIANA

For more details circle NED-146 F5 on enclosed inquiry slip

POLYETHYLENE BAG SEALER
uses adhesive packaging tape

Sealing of polyethylene bags with pressure sentitive packaging tape is accomplished in single downward stroke of this Nike bag sealer. Tape is automatically cut off at end of stroke. Sealer will handle regular 60-yd rolls or large triple-size rolls in widths from ¼ to ½ in. Peripheral tape roll guide, adjustable to tape width, centers tape in machine. Made by **Better Packages, Inc.**, Plant No. 1C, 253 Canal St., Shelton, Conn.

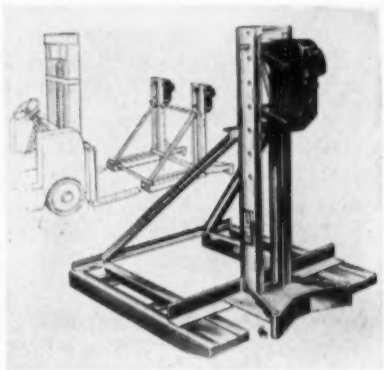
For more details circle NED-147 F5 on enclosed inquiry slip

BLOW GUN
trigger can be locked open

The 7-in. long tip of No. 5998 BlowJet gun facilitates reaching into hard-to-get-at places for drying and blow-off. Tip orifice provides a flat fan air pattern that covers a wide area effectively. Overall length of gun is 10¼ in. For prolonged operation, trigger handle can be held in open position by trigger lock. Entire unit is precision machined of brass. Made with ⅜-in. hose tail piece, blow gun is offered with two sizes of tips. Made by **Spraying Systems Co.**, 3211 Randolph St., Bellwood, Ill.

For more details circle NED-148 F5 on enclosed inquiry slip

DRUM HANDLING ATTACHMENT
for industrial fork lift trucks



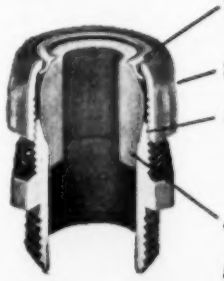
This slide-on Liftomatic drum handling attachment quickly converts standard industrial power fork lift trucks for lifting or transporting steel drums. Fabricated to any size fork dimensions, mounting can be made to accommodate from one to three drum handling units. These units can be spaced for fixed drum diameters or can be adjustable for various drum diameters. Attachment is picked up in same manner as a pallet, by entering forks into the slots. Made by **Marvel Industries, Inc.**, 2242 Cleveland St., Evanston, Ill.

For more details circle NED-149 F5 on enclosed inquiry slip

NEW T&B ENGINEERED strain relief connector

- fits wide range of cable diameters
- oil-tight

For positive strain relief for all types of portable cords and cables, you'll find these new T & B connectors hard to beat. Just check the features below, we know you'll be convinced. T43



1. Brass retaining ring minimizes take-up friction . . . *prevents damage by eliminating cable twisting.*
2. Tabolite-finished steel gland nut . . *rust-proof*, die-cast zinc alloy body.
3. Taper on both body and bushing gives double the take-up . . . assures a firm, permanent grip on any cable. Each fitting *accommodates a wide range of cable diameters* . . . you need stock only ½ your usual inventory.
4. Neoprene bushing is *unaffected by oil, water, sun, or chemicals.*
5. Available for .250" to 1.205" diameter cable.

Write for sample

THE THOMAS & BETTS CO.
Incorporated
24 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada
MANUFACTURERS OF FINE ELECTRICAL FITTINGS SINCE 1898

For more details circle NED-150 F5 on enclosed inquiry slip

THE HAMILTON
PORTELVATOR®
(Portable Elevating Table)

MAKES IT *Easy* TO LIFT • LOWER LEVEL • TRANSPORT LOADS UP TO 5,000 lbs.

3 TABLE SURFACES
Can be worked at from ALL 4 SIDES

Slow or fast lift.

Self locking at any height.

4 POINT SUPPORT
(table can't tip)

Lift mechanism can be operated from either end.

Turns easily on anti-friction casters. Positive floor lock.

WELDED CONSTRUCTION

*THREE STANDARD MODELS TO CHOOSE FROM

FREE BULLETIN
Write The Hamilton Tool Company, 901 Hanover Street, Hamilton, Ohio. Ask for Bulletin No. 5412.

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

For more details circle NED-151 F5 on enclosed inquiry slip

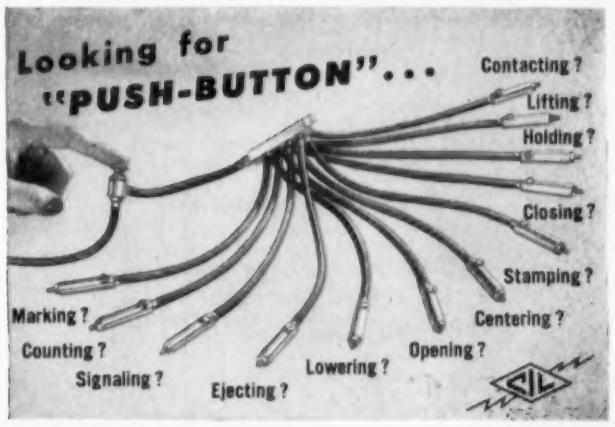
DOWNS SAFETY GRABS
...GRIP ANYTHING!

FOR CRANES AND HOISTS...
Material lifting equipment will do more work—faster, easier—when you have the proper "grabs" for every type of load. No matter what your hoists are handling—pipe, rails, drums, plate or structural steel, stone, timber, boxes or odd-shaped objects of any description—there's a DOWNS *Safety* Grab that will enable you to do it faster, easier *and* safer. Learn new short cuts to greater efficiency for YOUR plant with DOWNS' *complete line* of *Safety* hoist grabs!

Write for Free Illustrated Cat. 200B-6 Today!

DOWNS CRANE & HOIST CO.
MECHANICAL ENGINEERS
540 W. VERNON AVENUE • LOS ANGELES 37, CALIF.

For more details circle NED-152 F5 on enclosed inquiry slip



Clippard Miniature Air Cylinders, Valves, Accessories, MAY BE THE ANSWER!

Miniature spring-return cylinder, 2-⅜" x ⅞", and air valve, 1-⅜" x ⅝" overall, operate on 12 to 100 psi, up to 800 cycles per minute! Incorporate them into that automatic, or semi-automatic work set-up you are now considering to speed production. Accessories include complete line of miniature fittings, hose, manifolds, brackets and cam follower head. Illustrated literature, power and static data, dimensional drawings and price list free on request by writing:

Clippard INSTRUMENT LABORATORY, INC.
7390 Colerain Road, Cincinnati 31, Ohio
Manufacturers of R. F. Coils, Electronic Equipment, Miniature Pneumatic Devices

For more details circle NED-153 F5 on enclosed inquiry slip

Send for your *free copy* of the all-new Guardian Relay Catalog Number 11. Illustrations, dimensional drawings, full technical descriptions and operational data charts combine to present the most complete relay line available from any single source! Write today for your free copy, sent post-paid. No obligation.

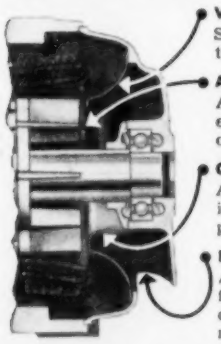
GUARDIAN ELECTRIC
1626-G W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

For more details circle **NED-154 F5** on enclosed inquiry slip

NEW MOTOR PROTECTION with ingenious

Ventrifoil

Ventrifoil
AT EACH END OF THE MOTOR
DIRECTS AIR AND DEFLECTS WATER—Ventrifoil directs air around bearing housings and into fans on the rotor. By forming a "vestibule" between the bracket openings and the fan inlet, water is deflected and separated from the air stream.



All New **UNICLOSED TYPE H**

U. S. MOTORS

In addition to Ventrifoil, U.S. Motors' new NEMA dimensioned Type H motor embodies a host of revolutionary exclusive features, such as improved asbestos-protected windings, Lubriflush transverse lubrication, normalized castings, solid cast rotor; all directed to the objectives of longer motor life and more efficient power.

Mail Coupon for informative full-color Bulletin

U. S. ELECTRICAL MOTORS Inc. NED-6
P.O. Box 2058, Los Angeles 54, Calif.
or Milford, Conn.
Send Type H Bulletin No. F-1856
NAME _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE ____ STATE _____

For more details circle **NED-155 F5** on enclosed inquiry slip

PORTABLE AIR GRINDER
1/5-hp tool develops 75,000 rpm

Weighing only 18 oz, haskAIR portable pneumatic grinder develops 1/5-hp at 75,000-rpm speed. Permanently sealed bearings require no external lubrication. Nose piece is removable for extra deep grinding. Hand-fitting aluminum housing permits pencil-like manipulation for precise grinding operations, and gyro action of the turbine holds tool steady. The 5¾-in. long tool is offered as a complete kit containing the grinder, carrying case, adapter hose, mounted points, dressing stone and wrenches. Available accessories include carbide tools, mounted points, cutters, files, tool post holder, air filter and air pressure regulator. Made by **R. G. Haskins Co.**, 603 S. Washtenaw, Chicago 12, Ill.

For more details circle **NED-156 F5** on enclosed inquiry slip

TEMPERATURE CONTROL
snap-acting disk type is sealed

Usable where space and weight are limited, Klixon C-4344 series disk type snap-acting temperature control is hermetically sealed. Disk is located opposite the terminal end at the bottom of the metal enclosure where temperature of air, liquids, or mounting surface can be followed closely. Differentials between preset opening and closing temperature settings may be 15° F and higher. Control withstands temperature from 60 to 250° F (125 to 250 v); 250 to 400° F range is available for ratings to 30 v ac-dc. Applications include heat and pneumatic controls and overheat protection of motors, transformers, rectifiers and storage batteries. Made by **Metals & Controls Corp.**, Spencer Thermostat Div., 1500 Forest St., Attleboro, Mass.

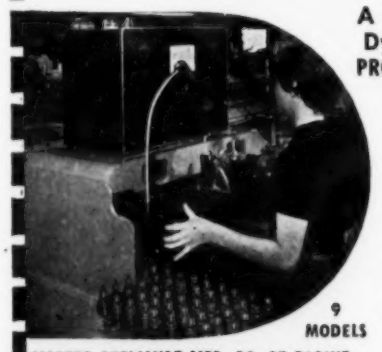
For more details circle **NED-157 F5** on enclosed inquiry slip

Rubber-Cushioned Abrasives

Weldon Roberts Rubber Co., Brightboy Industrial Div.—Multiuse Brightboy rubber-cushioned abrasives for a wide variety of finishing on all metals, plastics, wood, glass and laminated materials are subject of illustrated catalog No. 58. Wheels and accessory items are available in many sizes of either aluminum oxide or silicon carbide grains in combination with soft, firm or tough rubber binders.

For more details circle **NED-158 F5** on enclosed inquiry slip

BEKO BALANCER
INCREASES PRODUCTION OVER 100% WITH A HIGHER DEGREE OF ACCURACY



A Thoroughly Proven Dynamic and Static PRODUCTION BALANCER

- **PROVEN IN USE** ease of use by unskilled operators
- **PROVEN IN USE** for direct and accurate indications
- **PROVEN IN USE** for convenient and rapid operation
- **PROVEN IN USE** for dependable heavy duty service

9 MODELS

MASTER APPLIANCE MFG. CO. OF RACINE, WISCONSIN SAYS BEKO BALANCER HAS INCREASED THEIR PRODUCTION MORE THAN 100% WITH GREATER ACCURACY THAN EVER BEFORE.

Let us show you how a BEKO Balancer will cut your costs . . . Write for catalog

BALANCE ENGINEERING CO.
CHICAGO
Sales Division: MACDELL CORP.
846 W. LAKE STREET · CHICAGO 7, ILL.

For more details circle **NED-159 F5** on enclosed inquiry slip

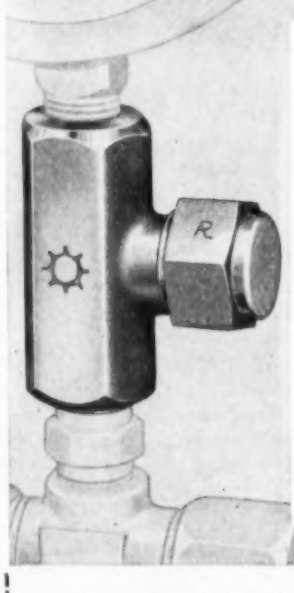
Make All Your Low Pressure Hose Lines from this NEW Aeroquip Kit

Durable ALL-STEEL kit 5144 speeds hose line replacement, cuts costs, reduces inventory. With remarkable new Aeroquip SOCKETLESS fittings and 1525 hose, fuel, oil, water, and air lines can be made and installed fast on all kinds of industrial and mobile equipment. Kit measures 12½" x 12½" x 6½". See your Yellow Page Directory for distributor's name, or write us.

Aeroquip
AEROQUIP CORPORATION, JACKSON, MICHIGAN
FLEXIBLE HOSE LINES • DETACHABLE, REUSABLE FITTINGS • SELF-SEALING COUPLINGS • BREAKAWAY COUPLINGS • HYDRAULISCOPE
AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD

For more details circle **NED-160 F5** on enclosed inquiry slip

Use Parker pressure-gage snubbers to prevent damage from surges



- Save sensitive pressure gages from damage.
- Make more accurate readings by eliminating rapid fluctuations of needle.
- Use Parker pressure-gage snubbers to damp line shock and vibration.
- With snubbing chamber mounted on side, 13 different snubbing adjustments can be made without disturbing line connections.
- Working pressure up to 5,000 psi; ¼" pipe-thread connecting ports.
- Only $6.00 plus postage.

Parker
Hydraulic and fluid system components

Order From Your Parker Distributor—or Tube and Hose Fittings Division, Section 455-U, The Parker Appliance Co., 17325 Euclid Ave., Cleveland 12, Ohio.

For more details circle **NED-161 F5** on enclosed inquiry slip

JACO LOW COST AUTOMATIC

STOCK REEL
COSTS NO MORE THAN STANDARD STOCK REELS

POWERED BY THE NATURAL SPRING OF UNCOILING STOCK

3 SIZES — ALL WILL TAKE 6" WIDE STOCK.
24" diameter $85.00
30" diameter $89.00
36" diameter $95.00
Guaranteed — money back if not 100% satisfied

New LOW prices on the JACO 3-inch and 6-inch SCRAP CHOPPER

WRITE FOR FULL DETAILS TODAY!
Dealer Inquiries Invited

JACO DEVICES, INC.
95 HIGH STREET • HINGHAM, MASS.

For more details circle **NED-162 F5** on enclosed inquiry slip

DUST COLLECTORS SAVES 6 WAYS

Dust problems are stopped quickly, efficiently with Dustkop. Thirty-seven *standard* models available for immediate delivery. Write for descriptive literature.

AGET MANUFACTURING COMPANY
1396 EAST CHURCH ST., ADRIAN, MICHIGAN

▲ For more details circle NED-163 F5 on enclosed inquiry slip ▲

Send for FREE sample kit . . . amazing new non-woven fabric

Here is a handy, *complete sample kit* that lets you see, feel, twist, pull or cut actual swatches of amazing new non-woven TUFFLEX Fabrics. It suggests how TUFFLEX Fabrics can save you time and money in production, add quality and durability in finished goods. For TUFFLEX Fabrics are clean, durable, resilient, dustless, odorless, workable—have good thermal-, sound-, and shock-insulating qualities. They are available in a variety of densities and thicknesses.

And so adaptable that they can be made firm or soft, dense or light, thick or thin, stiff or flexible, plain or colored! TUFFLEX Fabrics are now doing hundreds of jobs—new uses are being found every day. Send for idea-starting free sample kit. Wood Conversion Company, Dept. 127-65, First National Bank Bldg., St. Paul 1, Minnesota.

KEEP YOUR EYES ON TUFFLEX* FABRICS

*Reg U.S. Pat. Off.

▲ For more details circle NED-164 F5 on enclosed inquiry slip ▲

AMERICAN MONORAIL GANTRY CRANE SYSTEM *speeds galvanizing!*

Steel fence posts travel from fabrication to galvanizing over a gantry bridge which interlocks at a crossover track through doorway for passage to the MonoRail crane serving the tanks in the plating room.

All travel on the 4-ton system is motor operated and controlled by push-button station in the operator's hand.

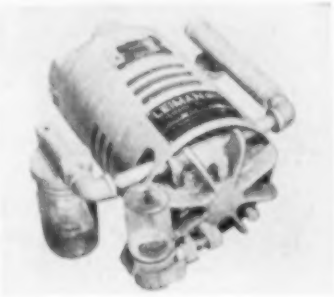
Here is a typical example of American MonoRail engineering for the solution of your handling problems.

Send for Bulletin C-1 illustrating hundreds of successful MonoRail installations.

AMERICAN MONORAIL COMPANY
OVERHEAD HANDLING EQUIPMENT
13116 ATHENS AVENUE • CLEVELAND 7, OHIO
[IN CANADA—CANADIAN MONORAIL CO., LTD., GALT, ONT.]

▲ For more details circle NED-165 F5 on enclosed inquiry slip ▲

AIR PUMP & MOTOR
develops pressure and vacuum



Model K-3 motorized air pump provides continuous vacuum of 28 in. mercury or 20-psi pressure and displacement of 7.2 cfm. Unit measures 18½ x 15 x 7 in. and features a ball bearing motor and rotary pump with cast iron housing, fan cooling, rubber silencers and automatic thermal overload motor protection. Two steel blades with automatic adjuster insure constant blade-to-wall contact. Ball bearing greasing system requires attention only once every 90 days. Leiman E-113 automatic lubricator operates 60 to 80 hours without refilling. Made by **Leiman Bros., Inc.,** 167-A Christie St., Newark 5, N. J.

▲ For more details circle NED-166 F5 on enclosed inquiry slip ▲

ROTARY AIR VALVE
two sizes for pressures to 150 psi

Hand operated three-position model 3010 MAC four-way rotary valve features a Hy-Car rubber rotor bonded to the shaft. Built with few working parts, it is available in ¼ and ⅜-in. sizes. Cadmium plated die cast construction permits variable throttling with air pressures up to 150 psi. Made by **Mechanical Air Controls, Inc.,** 10030-A Capital Ave., Oak Park, Detroit 37, Mich.

▲ For more details circle NED-167 F5 on enclosed inquiry slip ▲

SCREW FASTENING KIT
contains plastic screw anchors

Included in the K-6 Do-It-All screw fastening kit are 100 Hi No. 12 plastic screw anchors, 100 zinc plated sheet metal type screws and one ¼-in. spiral fluted masonry drill, packaged in a transparent plastic box. Anchors hold indefinitely in any material that can be drilled. Usable indoors or outdoors, they are unaffected by moisture, corrosion, heat or cold. Installation is in a ¼-in. hole. Kit is being introduced for $3.95. Available from **Holub Industries, Inc.,** 411 DeKalb Ave., Sycamore, Ill.

▲ For more details circle NED-168 F5 on enclosed inquiry slip ▲

Eliminate Shipping Labels!

PRINT DIRECT

Speeds Up Freight Marking

Quick! Accurate! Easy! Print shipping information direct on cartons, boxes, packages. Eliminate double operation of preparing labels and then pasting them to the containers. Get 1,000 or more clear, sharp impressions from one stencil without re-inking. New FORM-CUT® Stencil has facsimile of your label or shipping form die-impressed into the stencil. Then type or write in address or identification data . . . attach to duplicator . . . and print, like using a rubber stamp. Write for Literature and FREE SAMPLE FORM-CUT STENCIL AND PRINT.

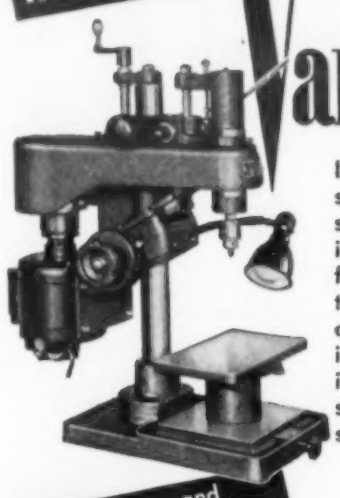
THE ORIGINAL HAND STAMP STENCIL DUPLICATOR

Also for addressing shipping tags and labels . . . prints postcards, menus, forms, bulletins. 8 complete outfits: $9.50 to $99.50, including supplies (f.o.b. factory). At office or shipping room supply dealers.

OVER 30 YEARS MULTISTAMP STENCIL DUPLICATOR ®
MANUFACTURED ONLY BY THE MULTISTAMP CO. NORFOLK, VIRGINIA

▲ For more details circle NED-169 F5 on enclosed inquiry slip ▲

REMEMBER . . . THE WORD 5415



Varimatic®

It's America's most outstanding super sensitive, small hole, precision drilling machine. And the difference in price between the Varimatic and the cheapest small hole drilling machine is reckoned in pennies per day. Consider that fact when you specify.

For prices and complete specifications ASK FOR FREE BULLETIN 5415

ADDRESS: THE HAMILTON TOOL COMPANY
901 HANOVER STREET
HAMILTON, OHIO

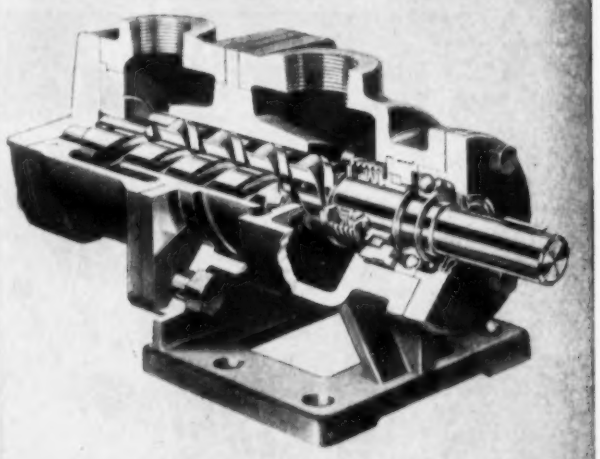
IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

▲ For more details circle NED-170 F5 on enclosed inquiry slip ▲

DE LAVAL
IMO PUMPS

Your De Laval Field Representative can help solve your pumping problems.

Profit by his sound, versatile experience. He can aid you in selecting the IMO Pump you need . . . give you facts and figures on performance . . . bring valuable judgment to bear on your specific fluid handling application.



For example, De Laval-IMO Series A313B Pump handles light or viscous fluids in hydraulic systems, rotary and steam atomizing oil burners, lubrication, governing systems and similar services. Use it for capacities to 80 gpm, pressures to 275 psi and intermittent pressures to 325 psi.

IMO Rotary Pumps have only three moving parts . . . offer all these advantages: high speed operation, quietness, freedom from vibration, simplicity and reliability. Models can be furnished for almost any fluid handling problem in capacities to 750 gpm and pressures to 1,500 psig. *Ask for Bulletin LG-A which gives data in chart form on the wide range IMO line.*

DE LAVAL *IMO Pumps*

DE LAVAL STEAM TURBINE COMPANY
808 Nottingham Way, Trenton 2, New Jersey

DL194

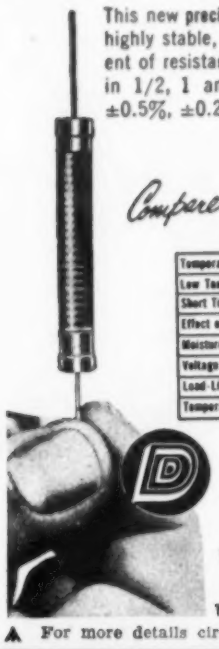
▲ For more details circle NED-171 F5 on enclosed inquiry slip ▲

NEW!

Davohm Series 850 Metal Film Resistor

Perfect compromise between precision wire wound—and composition types

This new **precision** film type resistor is hermetically sealed, highly stable, and has a temperature coefficient independent of resistance value. The Davohm Series 850 is available in 1/2, 1 and 2 watt sizes; to tolerances of ±1.0%, ±0.5%, ±0.25%; and, to any desired value.



Compare these performance figures!

	MIL-R-10509A ALLOWABLE CHANGE	Series 850 TYPICAL CHANGE
Temperature Cycling	1.0%	0.02%
Low Temperature Exposure	3.0%	0.04%
Short Time Overload	0.5%	0.02%
Effect of Soldering	0.5%	0.02%
Moisture Resistance	5.0%	0.08%
Voltage Coefficient	0.002%	0.00%
Load-Life (per 1000 hours)	1.0%	0.20%
Temperature Coefficient (PPM/°C)	±500	+370 ±20

Write for complete data.

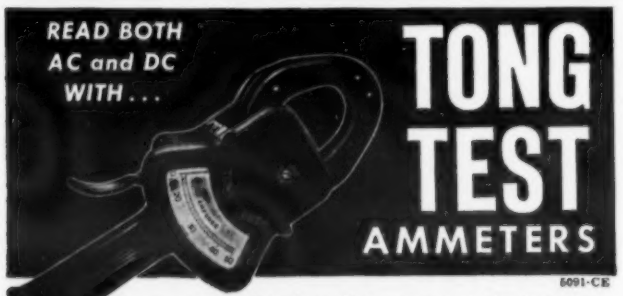
Available Through: THE DAVEN ELECTRONIC SALES CORP.
Associated with:
THE DAVEN CO. 199 Central Ave. Newark 4, N. J.

World's largest manufacturer of attenuators

▲ For more details circle **NED-172 F5** on enclosed inquiry slip ▲

READ BOTH AC and DC WITH . . .

TONG TEST AMMETERS



5091-CE

Type AX Type A for conductors up to 1-9/16" dia.

Type D for bus bars up to 4-1/2" x 1/2" or conductors up to 3-3/4" dia.

Type C for conductors up to 2-7/16" dia.

Type P for conductors up to 1/2" dia.

Only Tong Test measures both alternating and direct current. Simply snap the tongs around electrical conductor for instant readings . . . only one scale to read at a time. Ranges are quickly interchangeable.

Lightweight, accurate, safe, dependable . . . Tong Test is available in five types for use on AC frequencies up to 400 cycles as well as DC.

Write for 8-page Catalog ND-400

Type	AC-DC Ampere Ranges, Available As Specified
AX	50, 75, 100, 150, 200, 300, 400, 500, 600, 800, 1000
A	50, 75, 100, 150, 200
D	75, 100, 150, 200, 300, 400, 500, 600, 800, 1000
C	75, 100, 150, 200, 300, 400, 500, 600, 800, 1000
P	20, 30 or 40 (Not interchangeable)

COLUMBIA

COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Avenue, Cleveland 14, Ohio

▲ For more details circle **NED-173 F5** on enclosed inquiry slip ▲

AMAZINGLY COMPACT GEARING!

The most frequently cited reason for specifying Cone-Drive gears and speed reducers is "their amazing compactness."

The reason why Cone-Drive gears are so compact is that they are 'double-enveloping'. They thus have more teeth in continuous contact and load per tooth is distributed more evenly over each tooth face.

As a result, smaller gears—up to ⅓ smaller center distances—can be used to carry the loads when Cone-Drive gears are specified.

If space saving is one of your design objectives, it will pay you to look into Cone-Drive gears and reducers . . . NOW.

They can be a big help to you and they are available in a wide range of standard sizes and ratios.

CONE-DRIVE GEARS
Division, Michigan Tool Company
DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS
7171 E. McNichols Road • Detroit 12, Michigan

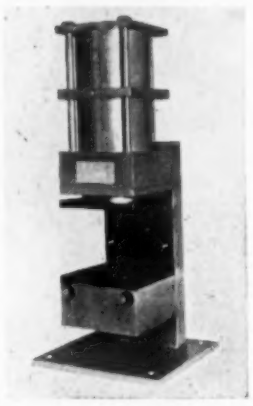
▲ For more details circle **NED-174 F5** on enclosed inquiry slip ▲

PNEUMATIC SWITCHES for control of valves or air motors

Built with two, three or four ports, line of pneumatic switches handles supply pressures up to 25 psi. Illustrated Gradual switch is a precision reducing valve. Clockwise rotation of the pointer from 0 to 10 gradually increases the delivery pressure 15 psi. Many functions are possible with various piping arrangements. These controls have connections for ¼-in. pipe and are furnished for flush or surface mounting with variety of engraved dials. Made by **Powers Regulator Co.**, Dept. NDC, 3400 Oakton St., Skokie, Ill.

▲ For more details circle **NED-175 F5** on enclosed inquiry slip ▲

AIR POWERED PRESS develops 1900 or 3800-lb thrust



Die forming, punching, swaging, press fitting and light bending are but a few of the operations that can be performed on this P66 series Vi-Speed press which has a 6 x 6-in. platen and a 3 or 6-in. stroke. Four standard models have vertical adjustable clearance of 8 in. They are available with single or double power to provide 1900 or 3800-lb thrust at 100-psi. Working pressure ranges from 15 to 150 psi. Air return is optional. Made by **Van Products Co.**, 5766 Old Ridge Rd., Swanville, Erie 7, Pa.

▲ For more details circle **NED-176 F5** on enclosed inquiry slip ▲

VACUUM CLEANER has wet and dry pickup attachment

Supplied with wet and dry pickup attachment, this 25-lb Nu-Vac vacuum cleaner will perform most cleaning tasks and can be run for long periods without overheating. Machine is also available with ball bearing casters. By-pass type motor develops 70 in. of vacuum and requires no oil or greasing. Water or dirt will not harm motor since it does not depend upon exhaust air to keep it cool. Tank holds over a bushel of dirt or 7 gallons of water. It is complete with 25-ft UL-approved cord. Made by **Empire Chemical Products Co.**, Dept. NED, 10 Longworth St., Newark 2, N. J.

▲ For more details circle **NED-177 F5** on enclosed inquiry slip ▲

. . . HAVE SOMETHING IN COMMON

They are both built to take it . . . for long, gruelling service. Both are engineered to the Nth degree. Boeing selected a Nagle 2" type "SW-OB" vertical shaft, centrifugal pump for pumping a chromium solution into dip tanks. Many parts of Boeing planes are processed with chromium to provide a durable exterior finish. Production schedules rule out leakage, failures, packing troubles. This Nagle Pump was designed to eliminate these troubles. Nagle Pumps are built for abusive service only — handling abrasive, or corrosive materials or hot liquids.

For facts, send for Catalog 5206.

NAGLE PUMPS

NAGLE PUMPS, INC.
1265 CENTER AVE., CHICAGO HEIGHTS, ILL.

PUMPS FOR ABRASIVE AND CORROSIVE APPLICATIONS

▲ For more details circle **NED-178 F5** on enclosed inquiry slip ▲

FAR LESS TIP BREAKAGE with "RING SEAT" CENTER DRILLS

USE "RING SEAT" CENTER DRILLS

IF YOU GRIND BETWEEN CENTERS

The "R" type, curved contour Ring Seat center drills give you a stable, accurate, precision center, quickly restored after heat-treat.

Ring Seat center drills produce a protected center at no extra cost—and carry a built-in discount because they last longer.

Lapping Centers After Heat Treat

is a simple quick operation, done in about one-third the usual time. Lapping with a rotating felt wick removes heat scale and restores a perfect center—at the original place.

A PREMIUM DRILL AT NO EXTRA COST

Ideal for Turning Tapers

LINK INDUSTRIES

13838 Elmira Detroit 27, Mich.

FREE CIRCULAR

▲ For more details circle **NED-179 F5** on enclosed inquiry slip ▲

Why this Jam-Proof 65R RIDGID is most pipe threader for your money

Easiest to Use... Threads 1", 1¼", 1½" and 2" pipe and conduit with 1 set of chasers that adjust to size in 10 seconds. Mistake-proof self-centering workholder sets instantly to size. Threader can't jam—it kicks out automatically when standard length thread is cut. Unbeatable speed, least work.

Perfect Threads... 65R cuts beautiful threads—and you find the factory test sample in your new die stock to prove it. No other threader gives you as much for your money.

Ask to see the 65R at your Supply House. Try it, buy it—it's a bargain in satisfaction.

The Ridge Tool Company, Elyria, Ohio, U.S.A.

RIDGID
Work-Saver Pipe Tools

▲ For more details circle **NED-180 F5** on enclosed inquiry slip ▲

Deburrs 4 jobs for every 3 deburred with old-style tools. Patented swivel-action leads blade along edges... no more nicks, scallops, or wrist and arm fatigue.

Hardened high speed tool steel interchangeable blades—small blade for tubing and small holes—a larger blade for straights, radii and large tubing.

Use BurrQwik for all metals and plastics—for cut, punched, molded and processed edges.

TRIAL SAMPLE!

Without obligation...test—try BurrQwik on your own production jobs—prove its value!

Rated companies may request on letterhead a complete BurrQwik set 500. Act today! Include name and address of your regular industrial supply house.

Anodized aluminum handle and 2 blades, in tough vinylite Pocket Pak—ready for instant use!

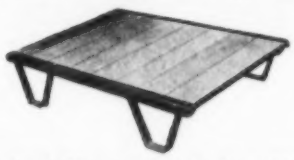
A WORLD OF KNOW-HOW
ENGINEERING, MACHINING, WELDING, METAL STAMPINGS, AIRCRAFT PARTS

Universal
METAL PRODUCTS, INC.
331 N. VINELAND, PUENTE, CALIF.
KANSAS CITY, MO. BRANCH: CONGRESS BLDG., 3527 BROADWAY

For more details circle NED-181 F5 on enclosed inquiry slip

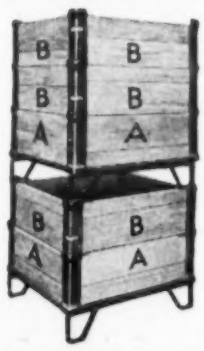
In production or in storage

IRONBOUND EQUIPMENT HANDLES SMALL PARTS MORE EFFICIENTLY



Standard 2-way entry bolted type skid built to handle loads up to 5 tons.

Standard box top welded to standard skid. Available too, with removable boxes. Handles many items in production and storage.



Flexible arrangement of boxes and skids permits tiering and stacking to meet your individual requirements. Provides quick availability, easy handling, or storage for complete units or parts.

Each of the units illustrated has an important use in modern industry. Ironbound skid platforms and box tops are prime sources of increased plant capacity so vitally needed today. Our representative can help you to increase your output and plant space. Catalog GP-7 may help you, too!

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

For more details circle NED-182 F5 on enclosed inquiry slip

CLOBBERED ?

This P. A. certainly is...

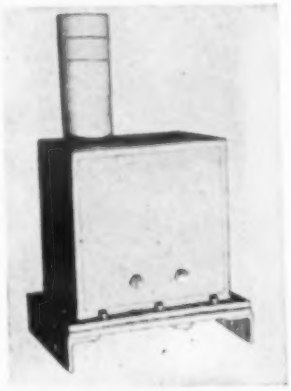
For lack of **a** time his cord set requirements **b** were ordered late and with haste. Result **c** big trouble (and losses) for himself, his company and its products.

Standardized CL cord sets ordered now will lick this gruesome possibility. Take a minute and call your Cords Ltd. salesman today. No obligation.

CORDS LIMITED
DIVISION ESSEX WIRE CORP.
121 DODGE ST., DEKALB, ILL.

For more details circle NED-183 F5 on enclosed inquiry slip

ELECTRONIC RELAY
used in high temperature operations



Highly sensitive electronic Infra-Ray relay will actuate at a safe distance any device associated with high temperature operations. It will turn on cooling sprays, actuate hot strip coilers, operate hot rolled rod receiving equipment, stop pouring of molten metal at correct level or activate recorders of high temperature instruments. The self-contained unit provides relay action brought out to three terminals: common, normally-closed and normally-open. Maximum contact ratings are 250 va rms, 5 amp prior to opening and 500 v prior to closing. Power requirements are 115 v ±10 per cent, 60 cycle, 0.1-amp ac. Made by **Industrial Gauges Corp.**, Dept. N, Englewood, N. J.

For more details circle NED-184 F5 on enclosed inquiry slip

SMALL LOT FINISHING MACHINE
semiautomatic unit finishes parts by submerging them in rotating mass

Wide variety of parts can be finished in short time cycles by the Roto-Mite semiautomatic mechanical finishing machine designed for small lot production or experimental work. Machine employs tub in which finishing mass is contained and rotated, and into which parts fixed to lower ends of vertically mounted spindles are submerged. Tubs with different type masses can be interchanged quickly and each has built-in sludge removal system.

Machine has four spindles and is offered with three different spindle arrangements. As spindle submerges part, it rotates as well, insuring uniform finishing. Tub drive assembly is belt-driven by 5-hp U. S. Varidrive vertically mounted in rear of machine. Processing speeds from 100 to 500 fpm can be selected. Machine uses either wet or dry masses ranging from large and very abrasive materials to small grain sizes. It is also designed for coloring operations using chrome steel balls. Tub is 44 in. diameter by 13 in. deep. Made by **Roto-Finish Co.**, 3702 Milham Rd., Kalamazoo, Mich.

For more details circle NED-185 F5 on enclosed inquiry slip

HERE'S THE REASON WHY

MERCOID® PRESSURE AND TEMPERATURE CONTROLS

OUTPERFORM AND OUTLAST ORDINARY TYPES

Series "D"

Available for general use, outdoor use or hazardous locations.

WRITE FOR BULLETIN 4B

● *HERMETICALLY SEALED CONTACT*

Always dependable—whether it operates once per year or several times per minute. It remains operative at all times because dust, dirt, grease or moisture cannot contaminate the contacting elements.

● *OUTSIDE ADJUSTMENTS*

Independent outside adjustments are provided for setting both the cut-in and cut-out points.

● *VISIBLE CALIBRATED DIAL*

No guesswork or calculations are required—the pointers indicate on an accurately calibrated dial, the exact operating pressures or temperature.

● *UNDERWRITERS' APPROVED*

All operating ranges for Series DA-21, DA-35 and DA-55.

THE MERCOID CORPORATION
4221 BELMONT AVE., CHICAGO 41, ILL.

For more details circle NED-186 F5 on enclosed inquiry slip

SIMONDS ABRASIVE CO., Philadelphia 37, Pa.
Division of Simonds Saw and Steel Co.
DISTRIBUTORS IN PRINCIPAL CITIES
BRANCH WAREHOUSES: BOSTON, DETROIT, CHICAGO, PORTLAND, SAN FRANCISCO

For more details circle NED-187 F5 on enclosed inquiry slip

Small, Powerful Yale *Worksavers*

do big-truck jobs in confined areas

maneuver in narrower aisles...add space to storage and production areas

This *Worksaver* Electric Hydraulic Lift Truck goes on freight elevators, over low-load floors, into tight areas. As ruggedly built as YALE's famous big trucks, it lifts and carries loads up to 7,500 lbs.... moves fully loaded up to 185 feet per minute...takes skids, pallets, turns so easily you can cut aisle widths, put more space to work. Other models and capacities also available. For more details, call your YALE representative, or mail coupon below.

YALE
*Reg. U. S. Pat. Off.

INDUSTRIAL LIFT TRUCKS AND HOISTS

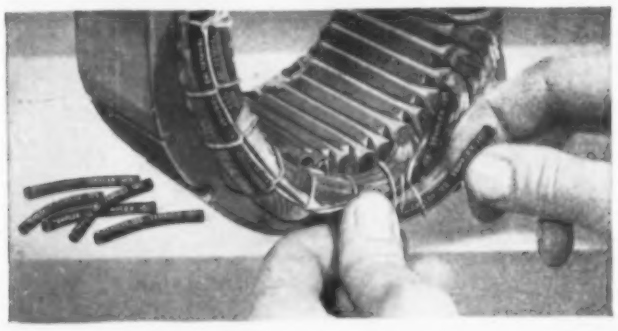
MAIL THIS COUPON TODAY

The YALE & TOWNE Manufacturing Co., Dept. 376
Roosevelt Boulevard, Philadelphia 15, Penna.
Please send me full information about YALE
☐ Worksavers ☐ Hand Trucks ☐ Attachments
☐ Electric Trucks ☐ Gas Trucks

Company_____
Name_____ Title_____
Street_____ City_____ State_____
In Canada write: The Yale & Towne Manufacturing Co. St. Catharines, Ontario, Canada

Gas, Electric, Diesel & LP-Gas Industrial Trucks • Worksavers
Warehousers • Hand Trucks • Hand & Electric Hoists

For more details circle NED-188 F5 on enclosed inquiry slip



More "Cut Through" Resistance with Improved Temflex* 105 Plastic Tubing

Need a tough, wear resistant plastic tubing? New formula Temflex 105 has improved heat deformation characteristics and resistance to "cut through". averaging 20% over older type tubings in standard penetration tests. Better high temperature color stability and lower shrinkage percentages too.

And there's no loss of the remarkable properties that originally made Temflex 105 so popular! Retains high dielectric strength and flexibility after varnishing, baking or high temperature duty. Resists common solvents. UL approved for continuous 105° C operation. Eliminates soldering and cuts assembly costs when insulating transformer leads, relay leads, etc. Fits all standard wire sizes.

Send for literature and test samples.

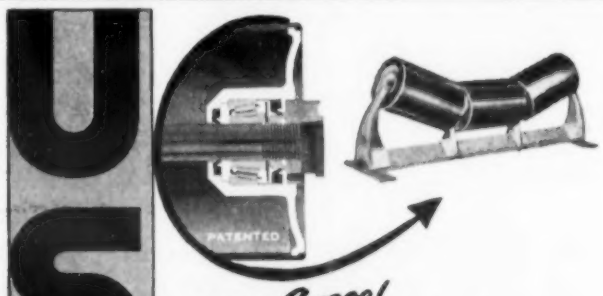
*T.M. Reg. U.S. Pat. Off.

PLASTICS PRODUCTS

IRVINGTON DIVISION
MINNESOTA MINING & MANUFACTURING COMPANY
14 Argyle Terrace • Irvington 11, New Jersey

1905-1955 Golden Anniversary Year

▲ For more details circle **NED-189 F5** on enclosed inquiry slip ▲



JUST

Saves Grease! Saves Labor! Saves Belts!

If You Use Belt Conveyors You Need

CONTINENTAL IDLERS

- UNIT-SEALED
- TIMKEN BEARINGS
- PRE-LUBRICATED

Write for Bulletin NED-116

ALL SIZES! ALL TYPES! CG-5301

INDUSTRIAL DIVISION
CONTINENTAL GIN COMPANY
Birmingham 2, Ala.
ATLANTA • DALLAS • MEMPHIS • NEW YORK

▲ For more details circle **NED-190 F5** on enclosed inquiry slip ▲

NEW! LIGHTWEIGHT! FAST-OPERATING!

Remove leaky or damaged tubes FAST with the new

AIRETOOL
internal tube cutter

Accurate and fast-cutting, the new Airetool Tube Cutter operates from inside the tube, through tube sheets from 1" to 4" thick. Two tough tool steel cutting blades mounted in a self-centering mandrel give double-efficient, faster, cleaner cutting of steel or non-ferrous tubes. Positive feed, lever-controlled by the operator, eliminates gouging and burning, and adds to cutter blade life. Powerful single-stage air motor provides plenty of "kick" for speedy cutting.

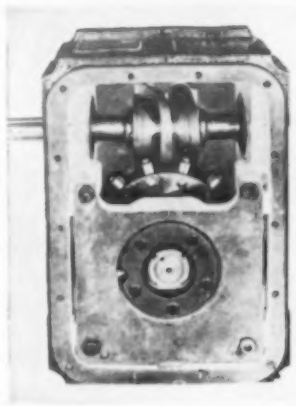
For full information on the new Airetool Tube Cutter and other Airetool Tube Maintenance Equipment, write, now, to The Airetool Mfg. Co., 308 S. Center St., Springfield, Ohio.

AIRETOOL
MANUFACTURING COMPANY
SPRINGFIELD, OHIO

Solve ALL your tube maintenance problems with AIRETOOL equipment!

▲ For more details circle **NED-191 F5** on enclosed inquiry slip ▲

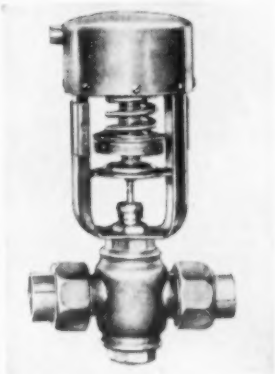
ROLLER GEAR INDEXING DRIVES allow up to 1000 indexes/minute



Precision indexing roller gear drives, previously made to order only, are now offered from stock at up to 25 per cent price reduction. These include 4, 6 and 8-stop units with and without housings. Drive is a high speed cam indexing mechanism designed for inclusion in automatic production machinery employing dial feeds, roll feeds, carriers and chain, or other types of intermittent feeding methods. It allows operating speeds up to 1000 indexes per minute and requires no maintenance for at least 8000 hours operation. Made by **Ferguson Machine & Tool Co.,** Roller Gear Div., Dept. 101, P. O. Box 191, St. Louis 21, Mo.

▲ For more details circle **NED-192 F5** on enclosed inquiry slip ▲

BELLOWS MOTOR VALVE controls flow of steam, gas or oil



Equipped with strong cadmium-plated steel spring and two-ply seamless metal bellows, this 992-D motor valve is used to control flow of steam, gas, oil, water and other fluids. Valve is employed as final control element in pneumatic and hydraulic systems to maintain pressure, temperature or level in industrial vats, tanks and processes. It has a linear valve movement and is available in sizes from ¼ to 4 in. and in wide variety of types. Either direct or reverse acting styles can be supplied. Made by **Robertshaw-Fulton Controls Co.,** Fulton Sylphon Div., Box 400, Knoxville 1, Tenn.

▲ For more details circle **NED-193 F5** on enclosed inquiry slip ▲

Drill & Reamer Facts

Whitman & Barnes—36-page illustrated booklet "Drill and Reamer Facts" covers the design and construction of twist drills, correct drill pointing and general instructions on the proper use and care of drills. Recommended speeds and feeds, cutting compounds and types of drill points to use with various materials are also detailed. Reamer section deals with design, construction, use, care, grinding and selection of reamers. Full dimension data on various types of drill sizes, thread sizes, taper shanks and sockets and related items are given.

▲ For more details circle **NED-194 F5** on enclosed inquiry slip ▲

FREE—84-PAGE MAGNET WIRE HANDBOOK

Latest information on all types of Anaconda Magnet Wire at your fingertips! Send for your free copy today.

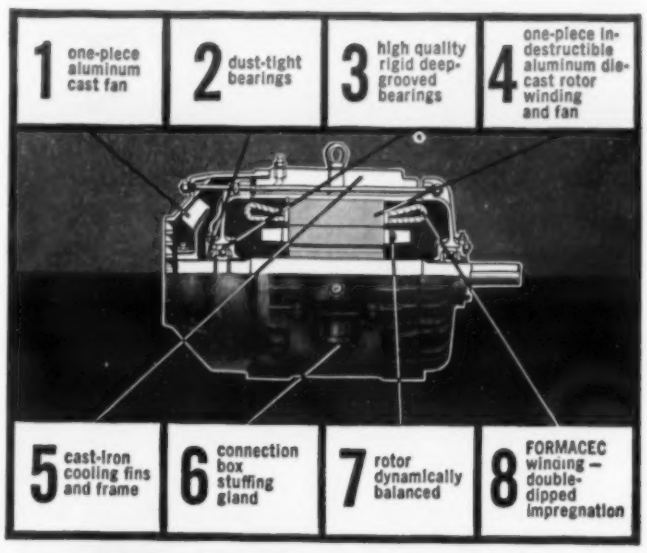
What 3 methods are *most* effective in removing Formvar insulation? How does Vitrotex* Magnet Wire give you greater latitude in design? What about enamel, cotton, nylon wire and all the others? Here—in one 84-page catalog—is the information you are looking for—both technical and general—on *all* types of Anaconda Magnet Wire. Get your copy today, free of charge. Just write: Anaconda Wire & Cable Company, 25 Broadway, New York 4, N. Y.

*Reg. U. S. Pat. Off. 55275

MAGNET WIRE
ANACONDA®

▲ For more details circle **NED-195 F5** on enclosed inquiry slip ▲

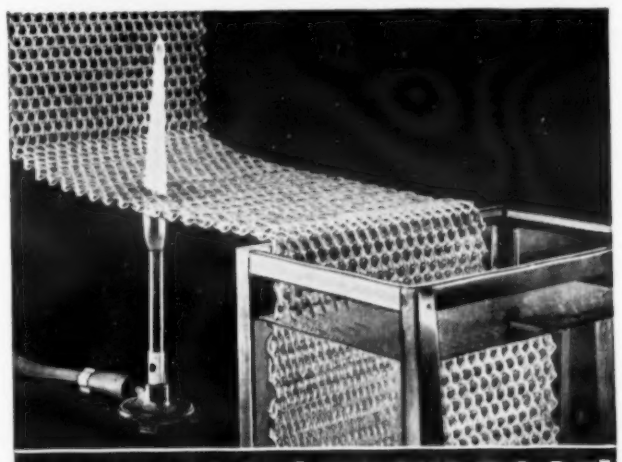
8 reasons why your ACEC electric motor is easier to maintain:



ACEC Motors are sold and serviced in U.S.A. by
ACEC ELECTRIC CORP.
Main Office: 40 East 49th St., New York 17 • PLaza 8-3101

ACEC MOTORS

▲ For more details circle **NED-196 F5** on enclosed inquiry slip ▲



HEATPROOF! RUSTPROOF!

Cambridge

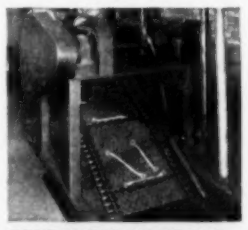
WOVEN WIRE CONVEYOR BELTS

permit continuous heating, quenching, washing

All-metal belt . . . corrosion resistant and impervious to damage at temperatures up to 2100° F . . . withstands most severe conditions of annealing, tempering, brazing, as well as quenching, pickling, washing. Moving belt eliminates batch handling, cuts costs, provides continuous production.

Cambridge Woven Wire Conveyor Belts have no seams, lacers or fasteners to wear more rapidly than the body of the belt . . . no localized weakening. Open mesh construction lets heat and gases circulate freely all around the work, and permits free drainage of process solutions.

No matter how you look at it; CAMBRIDGE Woven Wire Conveyor Belts are invaluable aids to AUTOMATION . . . eliminate profit-stealing batch and hand operations. They are made in any size, mesh or weave, and from any metal or alloy. Special raised edges or cross-mounted flights to hold your product during movement are available.



CONTINUOUS QUENCHING—of small or large parts on a Cambridge belt is faster and cheaper.

Call in your Cambridge Field Engineer to discuss how you can cut heat treating costs by continuous operation. You can rely on his advice. Write direct or look under "BELTING, Mechanical" in your classified phone book.

ASK FOR FREE 130-PAGE REFERENCE MANUAL illustrating and describing woven wire conveyor belts. Gives mesh specifications, design information & metallurgical data.

The Cambridge Wire Cloth Co.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

DEPARTMENT C, CAMBRIDGE 6, MARYLAND

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

▲ For more details circle **NED-197 F5** on enclosed inquiry slip ▲

Solve difficult storage problems

with

HARVESTORE

glass-coated storage structure

Manufactured by A. O. SMITH CORP. Exclusive Distributor: SPROUT-WALDRON

HARVESTORE, the only glass-surfaced, steel storage unit available today, eliminates rust, corrosion, and structural maintenance . . . is fire, weather, wind, moisture, rodent, and vermin-proof. Exclusive optional breather system shuts out air, prevents spoilage from oxidation. The Harvestore is already in use storing many hard-to-handle materials such as various dry chemicals, sawdust, ground cork, all kinds of meal and grain (both whole and ground), rice hulls, dried milk, starch, flour and many others.

MECHANICAL BOTTOM UNLOADING

HARVESTORE Mechanical Unloader

When desirable, the Harvestore can be equipped with the unique and highly efficient A. O. Smith sweep-arm bottom unloader. Materials that "bridge," like wood flour, and shavings can be efficiently stored and easily removed. This unloader is the first workable means of feeding out stored products in essentially the same order in which they were stored. With it, material is withdrawn mechanically, positively. . . no matter what the tendency to pack or bridge. The unloader is also adaptable to installation in other types of storage bins.

WRITE FOR DETAILS ON THIS MODERN SOLUTION TO DIFFICULT STORAGE PROBLEMS.

SPROUT-WALDRON

The Best in Milling Equipment Since 1866

8 LOGAN STREET, • MUNCY, PA.

Equipment for SIZE REDUCTION • MIXING & BLENDING • BULK MATERIALS HANDLING • PELLETING & CUBING • PRODUCT CLASSIFICATION

IN/395

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Have You Considered Using

PAPER AND SPOOL SHAPES?

PAPER CAN SAVE YOU MONEY!

We are equipped to make a wide variety of paper shapes for industrial users, including cones, tubes, cores, spools and moulded shapes. These products are available in various colors and many different surfaces. They can be impregnated, printed, perforated, scored, lacquered, flocked, or in any combination of these processes.

Our laboratory and engineering departments are available for consultation and experimental development. If it can be made out of paper, as a low cost substitute for metal, plastic or wood, SONOCO can make it and save you money.

PRECISION PAPER PRODUCTS SINCE 1899

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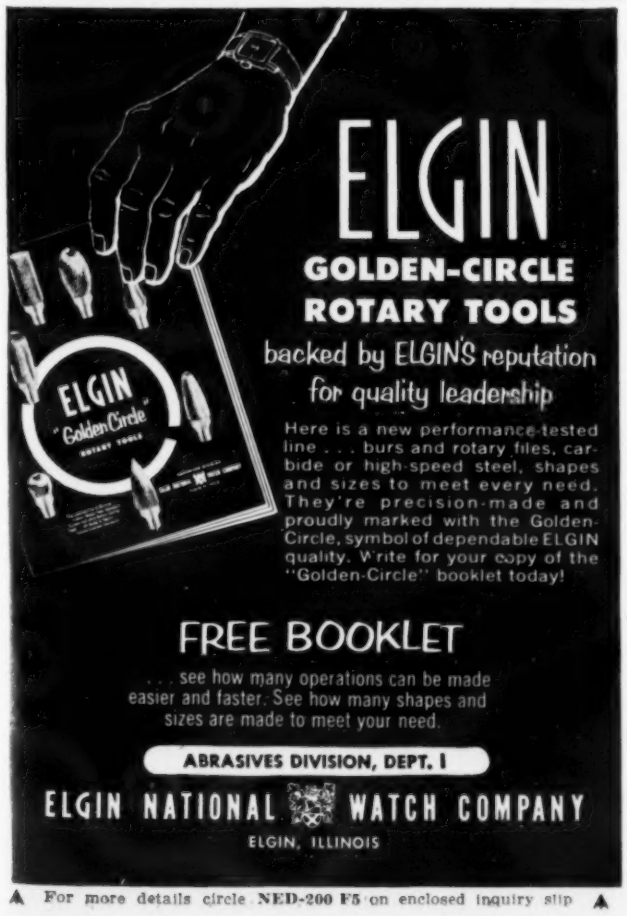
MEXICO: Sonoco de México, S. A., Apartado 10239, México, D. F.

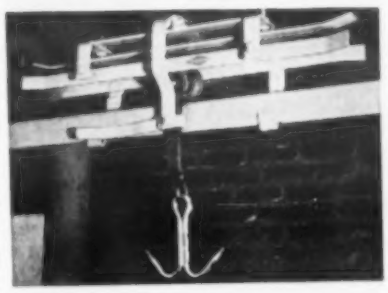
DEPENDABLE SOURCE OF SUPPLY

▲ For more details circle NED-199 F5 on enclosed inquiry slip ▲



▲ For more details circle NED-200 F5 on enclosed inquiry slip ▲

OVERHEAD TROLLEY LOCK permits safe removal of load



Developed specifically for use in meat packing plants, this Saf-T-Lok for overhead trolleys is also suited for industrial applications. It automatically locks the trolley to the overhead track at any loading or unloading point so that one man can safely place or remove the load. Lock is readily attached to any standard size track by means of two set screws. It can be fixed in open position to permit trolley to roll past it. For full information, write **Koch Supplies,** Dept. 37, 2516 Holmes St., Kansas City 8, Mo.

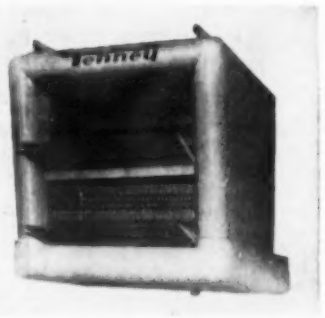
▲ For more details circle NED-201 F5 on enclosed inquiry slip ▲

MASONRY DRILLS in ¼ to 6-in. hole sizes

Milled slots for ejection of chips in improved line of Core-Vent carbide-tipped masonry drills are now wider to minimize packing, binding and generation of heat. Two of the inserted carbide teeth undercut clearance so that the core is easily removed as one solid piece. Drill sizes available are from ¼ to 6 in. Sizes from ⅝ to 6 in. have removable shanks to allow extension drilling of deep holes. Drills are plated with gold tone for appearance as well as anticorrosion properties. Made by **Super Tool Co.,** 21640 Hoover Rd., Detroit 13, Mich.

▲ For more details circle NED-202 F5 on enclosed inquiry slip ▲

UNIT COOLER offered in various capacities



Angle-Air unit cooler is easily installed by hanging its template mount; sliding unit into place on rail hangers; and connecting refrigerant, power and drain lines. Available capacities range from 4000 to 40,000 Btu. Coolers feature suction line provision for simple expansion valve bulb location, integral heat exchanger, sensitive aluminum fins which are mechanically bonded on electro-tin plated copper tube, adjustable louvers and vibration mounted motor. Made by **Tenney Engineering, Inc.,** Dept. E, 1090 Springfield Rd., Union, N. J.

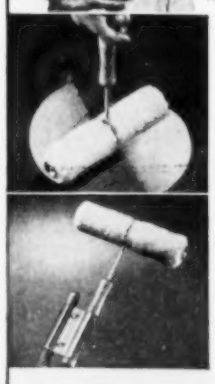
▲ For more details circle NED-203 F5 on enclosed inquiry slip ▲

New 2-Headed Roller

cuts plant painting time 52%

New Twin head roller furnished in four sizes!

BESTT DUO-MECHANIC *Industrial Rollers* designed for **PROFESSIONAL PAINTERS**



Exclusive T construction provides perfect balance—cuts fatigue differential action eliminates skid marks. Ideal for fences—concrete—plaster—dry wall construction.

Your order will be shipped through your nearest BESTT DISTRIBUTOR

All covers are 12/16" Lambskin

8"—No. 800	$4.89
11"—No. 1100	5.40
14"—No. 1400	6.09
18"—No. 1800	6.82

Also available in heavy duty model with Hardwood Cores.

Replacement covers available in 7/16"—12/16"—16/16" Lambskin and 7/16"—12/16" Dynel.

DEPT. J

BESTT ROLLR INC. P. O. BOX 551, FOND DU LAC, WIS.

▲ For more details circle NED-204 F5 on enclosed inquiry slip ▲

PUSH BUTTONS

FOR AUTOMATIC MOTOR STARTERS . . . CONTROLLERS . . . LIGHTING CIRCUITS, ETC.

EC&M provides a complete line of oil-immersed and air-break . . . "momentary" and "maintained" style push buttons.

The "momentary" style circuit is made or broken only as long as the operator's finger keeps the button depressed. The "maintained" style holds the circuits open or closed and this unit will also remain in "start" position even during under-voltage conditions or power failure.

Push button units by EC&M meet every industrial need for safe dependable starting and stopping.

Write for literature today

1900

THE ELECTRIC CONTROLLER & MFG. CO.

4498 Lee Road Cleveland 28, Ohio

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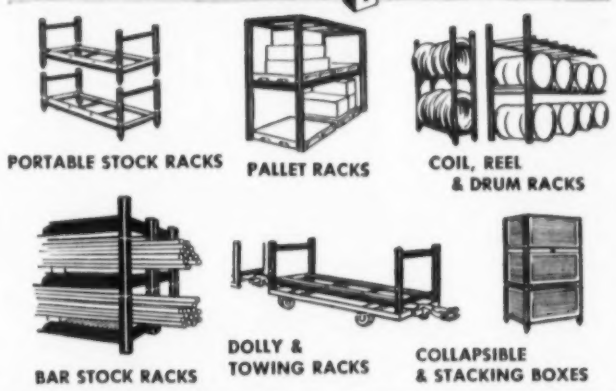
YOU CAN STACK ANYTHING ON EMI RACKS



be a good "warehouse-keeper" keep your materials

well stacked!

Equipment Manufacturing storage racks that stack are fabricated of strong, square tubular steel and are adjustable to fit any space or unit load in your plant or warehouse. Special racks designed to your specifications. Field Engineering Service on any installation. Before you decide on a new warehouse, additional storage space or the purchase of stacking equipment, write for our catalog. You save money, space and time with E. M. I. racks.

E. M. I. Pallet Racks increase efficiency in storage and handling at the Cleveland Warehouse of Standard Oil Company of Ohio.

Write for Illustrated Catalog

EQUIPMENT MFG. INC.

21566 HOOVER ROAD • DETROIT 5, MICHIGAN

• MATERIALS HANDLING EQUIPMENT
• STACKING RACKS FOR INDUSTRY

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Ametron® ELECTRONIC

CRANE SCALE

Weighs heavy loads suspended from crane hook. Printer, located in crane cab or other convenient location, records weight on tape or cards. New compact printer only 22" x 18" x 10½". Entire assembly designed for prompt and easy installation. Now available at new low cost.

Capacities 5, 10, 15 tons.

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STREETER-AMET CO.

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CHICAGO 13, ILLINOIS

Branches in Detroit, Pittsburgh, Allentown, Birmingham and Los Angeles

THE STANDARD OF ACCURACY SINCE 1888

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HOW YOU CAN GET

ADDED STEAM CAPACITY

EVEN IF CRAMPED FOR SPACE

All railroads do it on Diesel Streamliners, and now you can, too—install efficient Vapor Modulātic Steam Generators in spare space you'll never miss.

These capable units pass complete through normal plant-type doorways, come to you ready to connect and fire up without special foundation, expensive stack, separate enclosure. And none of the seven sizes from 18 to 160 h.p. needs more room than a watchman's cot!

EVERYTHING YOU WANT

You get steam in 2 minutes from a cold start . . . maintained selected pressure from 5 to 300 p.s.i., or more, automatically . . . oil, gas, or combination oil-gas operation . . . unified, coordinated control on multiple installations.

Over 10,000 Modulātics are now in use for heating, power, and processing. It's time to take a new look at modern steam generation. Ask for Bulletin 586.

VAPOR MODULĀTIC VERTICAL STEAM GENERATOR

VAPOR HEATING CORPORATION
80 E. Jackson Blvd.
Chicago 4, Ill.

In Canada:
Vapor Car Heating Co. of Canada, Ltd.
65 Dalhousie St. • Montreal 3

▲ For more details circle NED-208 F5 on enclosed inquiry slip ▲

If it moves—

there's an American hand truck to move it

No matter what kind of merchandise you handle—boxes, bags, kegs, crates, appliances—you'll move them faster, easier with an American all-steel truck custom-designed for the specific job.

Over 50 different models and sizes
Eastern and Western Types
Die-formed, pressed-steel side rails, cross-braces and bars are lighter, stronger than steel-reinforced wood
Steelite® ball bearing, rubber tread wheels give years of extra, free-rolling wear
Finger-tip balance makes light, fast work of heavy loads

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Stocked and sold nationally by over 350 Distributors

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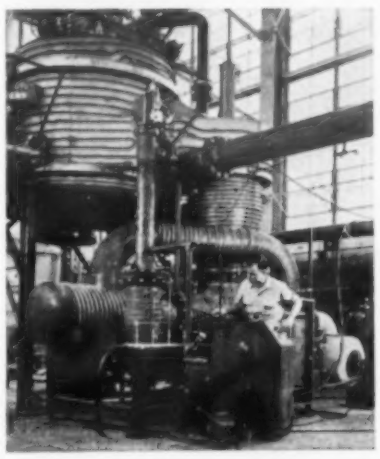
The American Pulley Company
4294 Wissahickon Ave.
Philadelphia 29, Pa.
Please rush your free catalog showing the complete American Material-Handling Line.

Name
Company
Address
City Zone State

AMERICAN HAND TRUCK HEADQUARTERS

▲ For more details circle NED-209 F5 on enclosed inquiry slip ▲

HIGH-VACUUM PUMP removes 12½ lb of air per hour



Up to 12½ lb of air per hour can be removed from semi-continuous, vacuum melting and casting furnace with type KS-16,000 diffusion-ejector pump, reportedly the largest three-stage oil ejector pump ever built. Pump removes air at rate of 18,000 liters per second (38,160 cfm) and will pump hydrogen at rate of 42,000 liters per second. Performance range from ½ to 200 microns mercury absolute pressure allows diversified application in chemical, petroleum and metallurgical industries. A single unit will handle gas load of 1000-lb vacuum melting and casting furnace as well as 5000 and 10,000-lb furnaces, now under consideration. Made by **Consolidated Vacuum Corp.**, 1775 Mt. Read Blvd., Rochester 3, N. Y.

▲ For more details circle NED-210 F5 on enclosed inquiry slip ▲

HIGH FREQUENCY GENERATORS 25 to 100-kw units offered for dielectric and induction heating

Compact design, accessibility and conformation to NEMA and AIEE standards are features of this line of high frequency generators for induction and dielectric heating applications. All cubicles are 36-in. wide, and they can be fully opened on two or three sides for servicing. Motor-generators are used to generate frequencies to 9600 cps and vacuum tubes for 450 kc to 40 mc. Standard units include 30, 50 and 100-kw motor-generator sets and 25 and 50-kw vacuum tube induction or dielectric generators.

Operation monitoring instruments are readily visible from any normal operating position. Power and heat controls can be adjusted easily to a reproducible operating cycle. Automatic protection is provided in event of water failure or overload. Operating and maintenance personnel are protected by automatic interlocks and positive high-voltage grounding. Made by **New Rochelle Tool Corp.**, 324 Main St., New Rochelle, N. Y.

▲ For more details circle NED-211 F5 on enclosed inquiry slip ▲

AMEs

...the preferred Dial Indicators

Over 16,000,000 cycles without wear or loss of accuracy... how many more will they complete?

Several Ames Model 282 Long Range Dial Indicators *with plain bearings* are currently giving an amazing demonstration of performance and endurance under test conditions. After more than 16,000,000 cycles each, at 240 strokes per minute, 9 hours a day—they still have their original accuracy!

The reasons for this outstanding record? Simply high quality materials, simple basic design, rugged construction . . . and expert craftsmanship.

If you would like to have our recommendations on your measurement problem, send blueprints and specifications. And ask for your free copy of our catalog on Ames micrometer dial indicators and gauges.

Representatives in principal cities. B. C. AMES CO. 34 Ames Street Waltham 54, Mass.

Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

▲ For more details circle NED-212 F5 on enclosed inquiry slip ▲

STAMPINGS for the FINISHED PRODUCT

SEE SESSIONS for Metal Specialties, Box & Case Hardware, Stamped Assemblies in a wide range of finishes.

J. H. SESSIONS & SON

289 RIVERSIDE AVENUE • BRISTOL, CONN.

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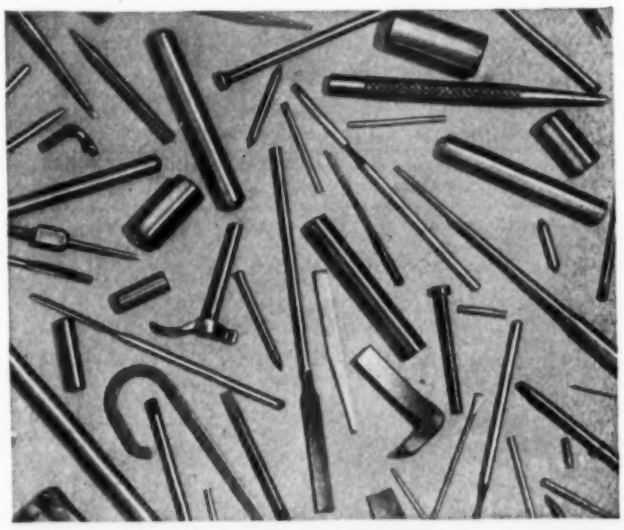
Rely on

TORRINGTON

for Volume Production of small precision parts



Volume production of small precision parts is a habit at Torrington. Each day we produce millions of pieces...exactly to customers' specifications of tolerance, hardness, temper and finish.

And we do it *faster, better and for less* than they can do it themselves. Send us a sample part or blueprint for a prompt quotation. And ask for our Condensed Catalog which shows hundreds of typical parts on which we can save you money.

THE TORRINGTON COMPANY
Specialties Division
808 Field Street, Torrington, Conn.

TORRINGTON SPECIAL METAL PARTS

Makers of Torrington Needle Bearings

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For after shutdown protection...

AGASTAT®

TIME DELAY RELAY

Allows operation of auxiliary protective devices* after operating cycle is stopped. Easily installed in any electrical line.

The AGASTAT is—

- light, versatile, dependable.
- instantaneous recycling.
- unaffected by voltage variations.
- adjustable in timing from 0.1 second to more than 10 minutes.
- available in models that offer delays on energizing and de-energizing, two step delays, manually-actuated time delay switch, remote push button control.

*WRITE for new 4-page application folder describing how one large company solved its after-operating problem. Address Dept. A21-65.

AGA DIVISION

Elastic Stop Nut Corporation of America

1027 Newark Avenue, Elizabeth, New Jersey
Pioneers in pneumatic timing.

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Precision Model

Standard Model

makes the Solid Arbor obsolete

CHAMPION E-X-P-A-N-D-I-N-G MANDRELS

The expanding sleeve, mounted on tapered arbor, expands automatically to fit the hole. Inserted by hand — no arbor press needed. Always an exact, positive, concentric fit. Locked by a single mallet blow. Unlocked the same way. CHAMPION Expanding Mandrels are used in machine shops around the world. Save time, cut production costs, whether the job calls for machining one piece or a thousand.

Precision Model has expansion range of .010". Available in regular sizes to fit holes from ½" to 3" diam. Holds work to tolerances of .0002" run-out. Guaranteed for precision grinding, turning and milling operations.

Standard Model maintains close tolerances, handles material of any length bore, hard or soft metals — from thin tubes and bushings to heavy castings and forgings. A set of fourteen will fit every hole from ½" to 9½" diam.

CHAMPION *Expanding Mandrels can be made in special shapes and sizes to fit any specifications. Quotations on request. Write for descriptive folder today.*

WESTERN TOOL & MFG. CO., INC.

Our 54th Year • Dept. 29 • Springfield, Ohio

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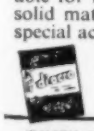
Bend a Variety of Materials

Accurately, Easily, Quickly with a versatile DI-ACRO* BENDER

Simple and complex bends can be made in ductile materials. Capacity of five hand models is from 1/16" wire to 1" round mild steel bar. Tooling is available for most forming requirements in solid materials and tubing, also many special accessories.

DI-ACRO HYDRA-POWER BENDER

A universal hydraulically operated bending machine that is equally as flexible as hand operated machine. Di-Acro Hydra-Power Benders are especially designed for those long runs and heavy bending operations which are impractical for manually operated equipment.



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*Pronounced Die-ack-ro

di-acro PRECISION METALWORKING MACHINES

O'NEIL-IRWIN MANUFACTURING CO.
354 8th Avenue • Lake City, Minn.

▲ For more details circle NED-217 F5 on enclosed inquiry slip ▲

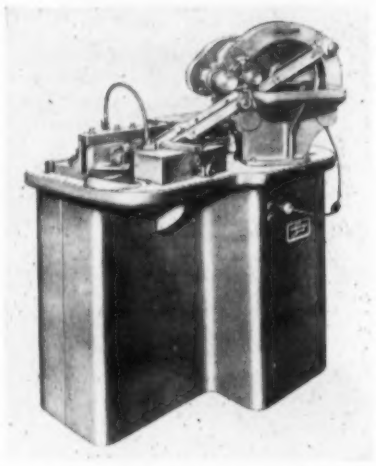
INDUSTRIAL FLUID DRIVE
six sizes rated 7½ to 800 hp give stepless speed control to 1800 rpm

Enclosed self-contained type VS class 2 Gyro fluid drives permit stepless speed control, no-load starting and excellent torque-limiting control for smooth transmission of power in all types of industrial equipment and machines. Units are available for a wide range of speed adjustment on both variable and constant torque loads. They are designed for dual rotation, and the drive and load can be reversed while in motion by merely reversing the input rotation when used with an electric motor. Drives are readily adapted to manual or fully automatic control.

Six sizes are available with ratings of 7½ to 800 hp for operating speeds up to 1800 rpm. Input and output shafts are supported on antifriction bearings, with a pilot bearing located between the impeller and the runner. Choice of control lever or handwheel for scoop tube positioning is optional. Water type oil coolers are standard, and air type coolers can be provided where required. Made by **American Blower Corp.**, Dept. N54, 8111 Tireman Ave., Detroit 32, Mich.

▲ For more details circle NED-218 F5 on enclosed inquiry slip ▲

THREAD ROLLING MACHINE
improved with rotary feed hopper



Efficiency of model A-190-R thread rolling machines has been increased 75 per cent by new feeding system which employs a rotary type hopper. Production has been boosted to 230 to 250 pieces per minute. A 1/12-hp motor drives hopper independently, permitting variable bucket speeds merely by changing gears. Cast iron hopper bucket lifts out for servicing without disturbing any previous settings. Thread roller's screw diameter capacity runs from machine screw sizes No. 2 (0.086-in.) to No. 10 (0.190-in.). Thread length capacity is ⅛ to 1½ in. with standard depth flat type dies; 2 in. with special dies. Machine features table-top working level and compactness. Made by **Hartford Special Machinery Co.**, 289 Homestead Ave., Hartford 12, Conn.

▲ For more details circle NED-219 F5 on enclosed inquiry slip ▲

LEIMAN *Rotary* **AIR PUMPS**

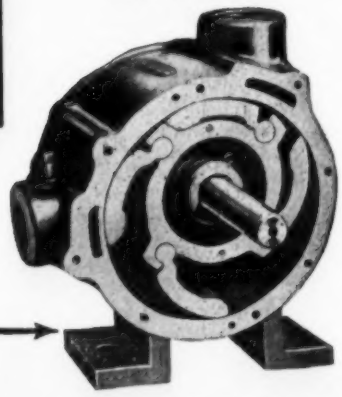
VACUUM to 29.9" Hg.
PRESSURE to 20 lbs.

THE "LIFETIME" PUMPS *that take up their own wear*

No maintenance

No complaints

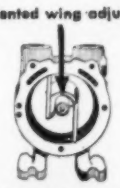
No shutdowns



4-WING TYPE →

Vacuums to 20" Hg.; pressures to 15 lbs.; displacement to 162 cfm. Patented hinged wings maintain contact by centrifugal force, take up their own wear.

Patented wing adjuster



2-WING TYPE. Vacuums to 29.9" Hg.; pressures to 20 lbs.; displacement to 40.8 cfm. Patented automatic wing adjuster assures blade-to-wall contact, prevents sticking.

Even after 10, 15 and 20 years, Leiman Air Pumps maintain rated capacities—run quiet and trouble-free—require no maintenance except lubrication. Compact, simple design has fewer parts, nothing to get out of order. Over half-million installed during past 60 years. Specify them for your equipment.

Free Engineering Data. Application Book showing 60 blueprints of actual installations, plus 16-page Catalog. Write today.

LEIMAN BROS., Inc.

167 Christie St., Newark 5, N. J.

▲ For more details circle NED-220 F5 on enclosed inquiry slip ▲

HAVE YOU HEARD ABOUT THE *Revolutionary New Motor* with DYNAMIC RESPONSE?

Write today for your copy of this new Bulletin C-2002, or call your nearest Reliance district sales office. C-1419-A

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RELIANCE Super-T LINE

RELIANCE ELECTRIC AND ENGINEERING CO.

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Canadian Division: Welland, Ontario

▲ For more details circle NED-221 F5 on enclosed inquiry slip ▲

B.F. Goodrich

TW ANALYSIS boosts tire life in every department of Dana Corporation

THE DANA CORPORATION manufactures truck and bus transmissions in its Toledo, Ohio, plant. Materials handling equipment is used to haul supplies, parts and finished transmissions all over the factory, from receiving room to shipping department. Tires roll through storage yards, over oil-soaked floors, over sharp steel shavings.

Here was a job for the B. F. Goodrich Tire and Wheel Analysis man. He studied Dana's equipment, loads and hauling surfaces. Then he recommended the right tire types, sizes, tread designs and tread compounds. Garageman Anthony Bosch says he's had tires that didn't last half as long as those recommended by the B. F. Goodrich man.

How about a FREE TW Analysis for you?

Dana Corporation's case is not unusual. The FREE B. F. Goodrich Tire and Wheel Analysis is saving time and money for industrial tire users all over the country. How about *you?* Just call your local B. F. Goodrich retailer or mail the coupon. This no-obligation Analysis includes money-saving maintenance tips as well as tire recommendations. You can be sure the advice you get is unbiased, because B. F. Goodrich makes a *complete* line of industrial tires. Act now! And if you manufacture materials handling equipment, there's a special TW Analysis for you.

Specify B. F. Goodrich tires when ordering new equipment

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Company_____
Street_____
City_____ Zone____ State____

▲ For more details circle NED-222 F5 on enclosed inquiry slip ▲

Give time and weather resistance to your product and economy to your production with Aluminum screws by Southern —

WOOD SCREWS MACHINE SCREWS TAPPING SCREWS

Also from Southern — in standard materials and finishes: WOOD SCREWS, STOVE BOLTS, MACHINE SCREWS, A & B TAPPING SCREWS, CARRIAGE BOLTS and HANGER BOLTS.

Write for free samples and stock list. Box 1360-Q

SOUTHERN SCREW COMPANY
Statesville, North Carolina
WAREHOUSES: NEW YORK CHICAGO LOS ANGELES DALLAS

▲ For more details circle NED-223 F5 on enclosed inquiry slip ▲

call for

KEM LUSTRAL®

the ONE custom-quality industrial enamel you can

spray, dip or brush
air dry or bake
use inside or out—for product finishing or maintenance!

Why buy and stock several enamels for jobs that one alone can do?

KEM LUSTRAL combines, in a single material, finishing properties usually obtainable only in several. It can be brushed, sprayed or dipped. It can be air dried or baked. And it is equally outstanding both as a product finish for wood or metal products, or for industrial maintenance!

KEM LUSTRAL is locally stocked in Sherwin-Williams Branches in principal cities throughout the country. Call your nearby Branch or write for color card and details!

SHERWIN-WILLIAMS
INDUSTRIAL FINISHES

The Sherwin-Williams Co.
General Industrial Division, Cleveland 1, Ohio

Please send details on KEM LUSTRAL—also on other items checked.

Other S-W Industrial Finishes
☐ Furniture Finishes
☐ Dimenso® (Hammered Finish)
☐ Industrial Lacquer
☐ Fast Bake Enamel

NAME _____
COMPANY _____
ADDRESS _____

▲ For more details circle NED-224 F5 on enclosed inquiry slip ▲

LOAD MEASURING RECORDER for industrial lift trucks

Every load lifted by an industrial lift truck greater than 200 lb is measured and recorded by the model DSR Servis recorder. Load to be measured can be varied from 200 lb to the capacity of the truck by adjusting a Barksdale hydraulic pressure switch in the line between control and lift. It also shows when and how long trucks are busy and idle. The two sets of facts are permanently recorded on easily read time charts driven by a clock-type mechanism. Periods of 4, 8, 12 or 24 hours are recorded on a single chart. Made by **Service Recorder Co.**, 1422 Euclid Ave., Cleveland 15, O.

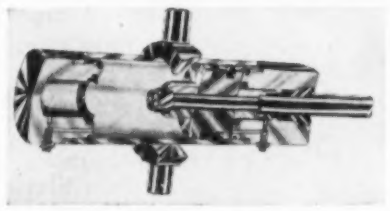
▲ For more details circle NED-225 F5 on enclosed inquiry slip ▲

CHAIN WRENCH grips round, square or other shapes

Chain and jaw grip of this all-purpose chain wrench enables it to hold and turn any round, square, hex or irregular shape. It is convenient to use in tight corners, between parallel pipe lines or in other restricted areas where clearance is too tight for head of conventional wrench. Ratchet-like action allows turning in either direction from either side. Wrench is offered in 10, 14, 18, 24 and 36-in. handle lengths. Made by **Reed Mfg. Co.**, 1452 W. Eighth St., Erie, Pa.

▲ For more details circle NED-226 F5 on enclosed inquiry slip ▲

AIR & HYDRAULIC CYLINDERS cushioned operation gives long life



Cushions which result in complete shut-off of oil or air in T-J Spacemaker cylinders assure smooth cushioning with automatic valve action for fast return. Three years of troublefree performance in industrial applications is reported for these cylinders. They are available off-the-shelf in choice of 8640 variations, with any style mounting, bore diameters to 5 in. and strokes of 1 to 20 in. in ½-in. increments for air or oil. Made by **Tomkins-Johnson Co.**, 609 N. Mechanic St., Jackson, Mich.

▲ For more details circle NED-227 F5 on enclosed inquiry slip ▲

SAFETY EQUIPMENT FOR ALL INDUSTRIES

for . . . CHEMICAL BURNS • CLOTHES ON FIRE

READY FOR INSTANT USE

EYE WASHING FOUNTAIN
Leading industrial doctors advise immediate washing with plenty of running water as the best first aid treatment for any chemical in the eyes. Fountain works automatically by resting forehead on the valve and provides a constant stream of water to both eyes.

Easily installed.

EMERGENCY SHOWER

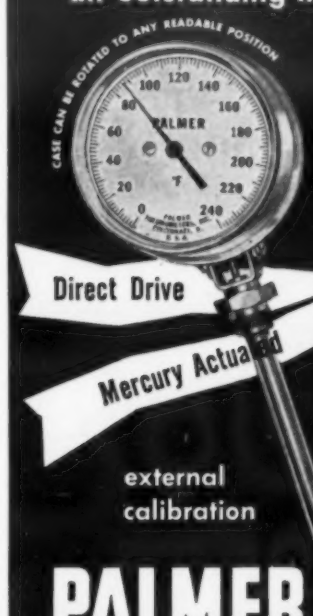
Allows an individual to thoroughly drench *himself* with gallons of water by leaning against operating chain which attaches to floor.

Write for Bulletin No. 86 for further data on both items

IPCO Safety Equipment for all Industries
INDUSTRIAL PRODUCTS COMPANY
2807 N. Fourth Street • Philadelphia 33, Pa.

▲ For more details circle NED-228 F5 on enclosed inquiry slip ▲

PALMER presents
an outstanding improvement in
DIAL THERMOMETERS



• No Sector
• No Pinion
• No Linkage
• Constant Accuracy
• Easy Readability

external calibration

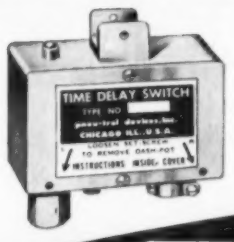
Full 3½" Dial Face

WRITE FOR BULLETIN 350

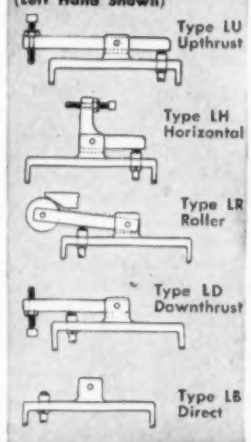
PALMER THERMOMETERS, INC.
Norwood Ave., Cincinnati 12, Ohio
Mfrs. of Industrial Laboratory Recording and Dial Thermometers

▲ For more details circle NED-229 F5 on enclosed inquiry slip ▲

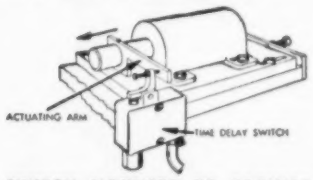
NEW CYLINDER TIME DELAY CONTROL SWITCH
INCREASES APPLICATION . . . WIDENS USE OF CYLINDER POWER



For Any Type Actuation Left or Right Hand (Left Hand Shown)



Pneu-Trol Time Delay Switches provide independent hydraulically controlled adjustable time dwell between ¼ and 60 seconds in 20 to 1 ratios. Readily mounted on machine for cylinder dwell at a positive stop. Compactly designed—a simplified low cost answer to electrical time dwell control of any air or hydraulically operated machine movement such as press work, burnishing, coating, quenching, metal-cutting, etc. Ideal for automatic feeders. Dimensions: 4⅛" wide; 2⅜" high; 1-7/16" deep. Overall height 4⅛".



SWITCH MOUNTED TO PROVIDE DWELL AT END OF POWER STROKE

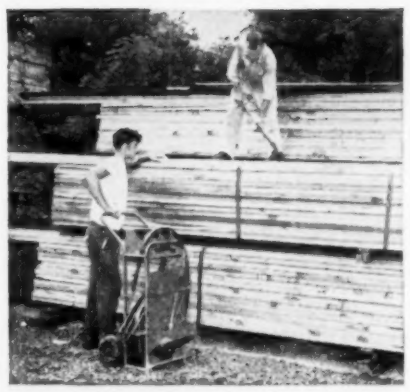
Write for descriptive literature and complete details.

PNEU-TROL DEVICES, INC.
1432 N. Keating Ave. Chicago 51, Illinois

▲ For more details circle NED-230 F5 on enclosed inquiry slip ▲

Get UNBIASED strapping recommendations from Brainard®

Brainard supplies *both* steel strapping and strapping tape . . . Brainard salesmen can recommend the method that fits your exact needs. The Brainard strapping service can reduce your handling costs...help deliver your products in better condition.



Brainard®
SHARON STEEL
STEEL DIVISION
SHARON STEEL CORPORATION

Write for FREE CATALOG on Brainard products and tools, Brainard Steel Division, Dept. Y-6, Griswold Street, Warren, Ohio.

▲ For more details circle NED-231 F5 on enclosed inquiry slip ▲

MAINTENANCE MEN!

SOLDER • HEAT • BRAZE with the

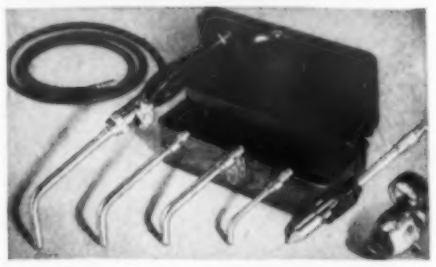
Prest-O-Lite 5-in-1 Outfit

Trade-Mark

Fast

Clean

Economical



This compact outfit easily handles all of the soldering, heating, and light brazing necessary for maintenance and repair work in most buildings, plants and factories. Torch operates from small, lightweight tanks of acetylene that are easily carried right to the job. Ask your LINDE jobber for a demonstration. Or write to LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 East 42nd St., New York 17, N. Y. In Canada: Dominion Oxygen Company, Toronto.

Get it from your LINDE jobber

The terms "Linde" and "Prest-O-Lite" are registered trade-marks of Union Carbon and Carbon Corporation.

▲ For more details circle NED-232 F5 on enclosed inquiry slip ▲

Corning heating panels are suitable for operation at temperatures as high as 660°F., range in watt densities from 2.6 to more than 9 watts per square inch.

New Corning industrial radiant panels give

uniform heat distribution

Corning heating panels radiate infrared rays in a manner that gives you unrivaled uniformity of heat distribution without need of deep reflectors.

Because the heat is radiated from a flat glass surface, distribution is uniform, little is lost to the air and no oppressive heat surrounds the installation to reduce worker efficiency and comfort. Since there is no glow, you also eliminate eyestrain and fatigue from glare.

The Corning panels emit long wave-length radiation (exceeding 4 microns). Most materials, *regardless of surface texture or color,* absorb such radiation as black bodies, permitting maximum absorption of heat energy. The panels are smokeless and sootless, easy to install, safe to operate. The electrically conductive surface of the glass is the back surface—away from the work and completely enclosed.

You can build tunnels or towers utilizing practically every square inch for radiant heat, or you can suspend banks of panels overhead to save floor space. Each panel carries a one-year warranty.

For other features of this new concept in infrared heating, including design specs and diagrams, write for Bulletin B-89—or check this publication's inquiry slip.

CORNING GLASS WORKS
76 CRYSTAL STREET
CORNING, N. Y.

Corning means research in Glass

▲ For more details circle NED-233 F5 on enclosed inquiry slip ▲

SET SCREW IDEAS

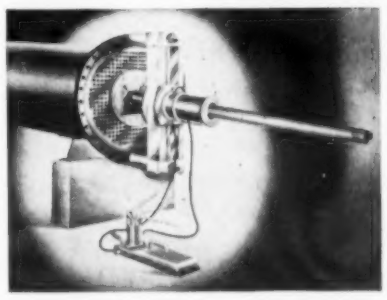
samples in case aid in selection

Over 30 labeled samples of set screw products are contained in the Setco Jewel Case, an 11 x 8¼ x 2-in., black leatherette-covered, red velvet-lined case designed to aid in selecting set screws and similar products. It also has a compartment for additional test samples which may be made up to specifications. Included are hopper-fed, self-tapping and Pivot-Lok set screws; Super-Tork, Pre-Tork, Jam-Lok and Jail-Lok screws; several self-locking types with slotted or socket heads; and allied products such as pipe plugs and hexagon keys or wrenches. Brochure describes each item and suggests applications. Jewel Case sent on loan basis by **Set Screw & Mfg. Co.,** 130 Main St., Bartlett, Ill.

▲ For more details circle NED-234 F5 on enclosed inquiry slip ▲

HYDRAULIC TUBE REMOVER

for heat exchanger bundle tubes



Two men using the Hydro-ejector hydraulic handling device can push a bundle of heat exchanger tubes 8 ft in less than 25 minutes. Large bundles will not stick when moved rapidly with the 12,000-lb force exerted by the device. It is attached to the exchanger shell. Packaged unit includes pump, hose, adjustable yoke, ram, tie ends, cable and other required equipment. Pumping unit consists of two pumps, one for loosening the bundle, the other for moving it through the exchanger shell. Rated capacity is 6 tons. Made by **M. W. Kellogg Co.,** 4 Barclay St., New York, N. Y.

▲ For more details circle NED-235 F5 on enclosed inquiry slip ▲

Flexible Pressure Tubing

Polymer Corp. of Penna.—Air, process, coolant, fuel and oil, lubricant and hydraulic lines are possible applications for Nylaflow flexible nylon pressure tubing. Subject of 6-page illustrated folder, tubing withstands 180° F continuously or 300° F intermittently. Sizes from ⅛ to ⅜-in. OD with 1000 and 2500 psi burst pressures are available.

▲ For more details circle NED-236 F5 on enclosed inquiry slip ▲

NOT THIS...

Now...for a good shower

—deep freeze!

—scalding hot!

BANISH "BOOBY TRAP" SHOWERS

Use POWERS THERMOSTATIC Water Mixers

BUT THIS

Real comfort and safety. No waste of time or hot and cold water.

POWERS THERMOSTATIC WATER MIXERS

—eliminate shower accidents

They are completely automatic, hold shower temperature wherever you want it regardless of **pressure** or **temperature** changes in water supply lines. Failure of cold water instantly shuts off the shower.

Tests prove Powers is safest shower regulator made for factories, schools, hospitals, hotels and clubs. Thousands now in use.

Used for Many Industrial Processes. Users report control within ½° F. Temperature Ranges: 65-115° F., 60-125° F., 75-175° F. Write for Bulletin 365. \b13)

THE POWERS REGULATOR CO.
Skokie, Ill. • Offices in Over 50 Cities • Est. 1891

▲ For more details circle NED-237 F5 on enclosed inquiry slip ▲

Only 12 minutes to drill 6¾" holes through 7½" reinforced concrete with TRUCO WATER SWIVEL and TRUCO SWIVEL DIAMOND DRILL BITS

Truco combination cut drilling time from half-a-day to 12 minutes per hole in department store water mains installation. Truco Swivel Diamond Bits in Truco Water Swivel drill reinforced concrete, granite, marble, brick, ceramic tile, etc. at amazing speed. Use with portable or stationary drills. Indispensible to masons, electricians, plumbers, maintenance crews. Can easily save entire cost on first job. Write for folder.

WHEEL TRUEING TOOL COMPANY
61-3200 West Davison Avenue • Detroit 38, Michigan

▲ For more details circle NED-238 F5 on enclosed inquiry slip ▲

NEW

McGILL® SEALED GUIDEROL® full type roller bearing

PROVEN PERFORMANCE PLUS NEW PROTECTION

The new SG series GUIDEROL Bearing provides low-cost sealing for many applications for which ordinary needle type bearings and separate seals are often too cumbersome and expensive. Commercial lip-type seals are added to the standard full-type GUIDEROL roller bearing without increasing overall bearing size. Whether you want to seal lubricant in or keep dirt out, you will find the answer in one of the five combinations possible with single or double seals.

Send for McGILL Catalog No. 52.

50th McGILL Anniversary

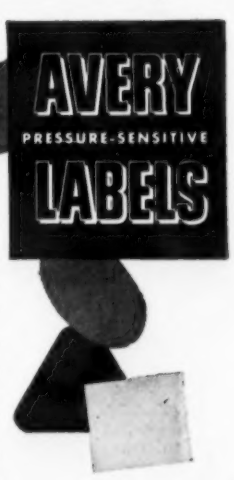
YOU CAN DEPEND ON **McGILL QUALITY**

McGILL MANUFACTURING CO., INC. 101 N. Lafayette St. Valparaiso, Indiana

▲ For more details circle NED-239 F5 on enclosed inquiry slip ▲

For *instant* identification try

Color coding with AVERY PRESSURE-SENSITIVE LABELS



Hundreds of manufacturers and businesses—from a San Antonio bakery to a New England thread mill—have turned to quick visual color coding with Avery pressure-sensitive Labels.

Instant dating and identification of the contents—by quality or quantity—saves valuable time and prevents costly errors—ends stockroom confusion!

Four basic labels can give almost any amount of data needed—they can be preprinted with standard information, then imprinted for each particular job *as it is used!*

Get the facts on how Avery can help solve *your* labeling problems—mail the coupon today!

AVERY ADHESIVE LABEL CORP., Custom Div. 102
176 Liberty St., New York 6
608 S. Dearborn St., Chicago 5
1616 S. California Ave., Monrovia, Calif.
Offices in other principal cities

☐ Please send me case histories on color coding and free samples.
☐ Please have the Avery man call.

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE_____
OUR BUSINESS IS_____

Kum-Kleen®

KUM-KLEEN when you want a REMOVABLE label.

Perma-grip®

PERMA-GRIP when you want a PERMANENT label.

▲ For more details circle NED-240 F5 on enclosed inquiry slip ▲

IF YOU'RE

Handling Coil

CHECK THESE C-F LIFTER ADVANTAGES

- 1 Lifter handles wide range of coil sizes
- Requires minimum of only 10" to 12" between piles — saves storage room
- 1 man operation — eliminates hookers
- Positive grip on coil—no damage to material

● C-F Coil Lifters are saving time and labor in many plants and warehouses because they can pick up, carry and set down a coil of steel faster and safer than any other method. Infinite jaw openings permit handling a very wide range of coil widths . . . carrying legs open fast, stay open until operator closes them on coil. Narrow legs require minimum space between piles—a space saving advantage. Made in motorized models for crane cab or pendant operation as well as manual types with chain wheel, in capacities from 3 tons up. Powered Rotating Heads available. Opening ranges to suit your requirements.

Write for illustrated Bulletin.

CULLEN-FRIESTEDT CO.
1304 South Kilbourn Avenue • Chicago 23, Illinois

▲ For more details circle NED-241 F5 on enclosed inquiry slip ▲

TOGGLE CLAMP
in 800, 1000 and 2000-lb models

High pressure vertical clamping on jobs where space limits the use of vertical handles can be accomplished with Caddy type H toggle clamps. The all-welded H-0, H-1 and H-2 clamps have clamping pressures of 800, 1000 and 2000 lb, respectively. Large pivot pins, heavy frame which will not spring under maximum load and heavy links and handle which allow use of pipe extension without damage are features. Made by **Erico Products, Inc.**, 2072 E. 61st Pl., Cleveland 3, O.

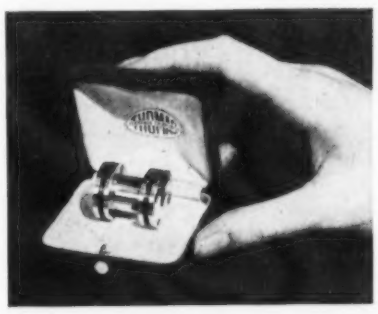
▲ For more details circle NED-243 F5 on enclosed inquiry slip ▲

AIR IMPACT WRENCH
4¾-lb tool has ⅜-in. capacity

Cast magnesium parts reinforced with Helicoil steel thread inserts and a steel hood are construction features of the model J-4S air impact wrench. Weighing only 4¾ lb, it has a ⅜-in. bolt capacity and measures 6¾ in. in length. Direct drive air motor gives 1800 impacts per minute. A ⅝-in. square drive is standard, with a ½-in. square drive or 7/16-in. female hex quick-change chuck optional. Made by **Rotor Tool Co.**, 26301 Lakeland Blvd., Cleveland 23, O.

▲ For more details circle NED-244 F5 on enclosed inquiry slip ▲

MINIATURE FLEXIBLE COUPLING
½-oz unit in bore sizes up to ¼-in.



Added to line of flexible couplings for mechanical power transmission is this miniature coupling which is applicable in timing machinery and electronically controlled automatic machines. Coupling weighs ½ oz, has nonmagnetic (aluminum-beryllium copper) construction and minimum backlash. There are no sliding parts. Crosspull and end thrust on connected shafts is practically eliminated by flexibility of coupling. Unit is well adapted for selsyn or other drives where backlash cannot be tolerated. It is furnished in all bore sizes up to ¼-in. Made by **Thomas Flexible Coupling Co.**, Warren, Pa.

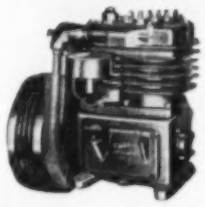
▲ For more details circle NED-245 F5 on enclosed inquiry slip ▲

GET MORE PRODUCTION PER MAN HOUR

with the Help of Dependable Efficient

Curtis

Air Compressors



Available up to 320 cu. ft. Can be supplied base mounted up to 50 H.P. or tank mounted up to 15 H.P. Timken bearing equipped . . . precision built.

Air Cylinders and Hoists

To lift, lower, push, or pull

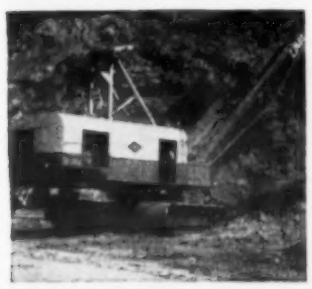
Pendant air hoist is ideal for lifting or lowering—Bracketed Air cylinder can be mounted in any position for lifting, lowering, pushing or pulling.

For more information write to:

CURTIS PNEUMATIC MACHINERY DIVISION of Curtis Mfg. Co.
1979 Kienlen Avenue • St. Louis 20, Missouri 764

100 Years of Successful Manufacturing Experience

▲ For more details circle NED-247 F5 on enclosed inquiry slip ▲



Aluminum enamel is the standard protective coating for all cabs of Lima shovels and cranes, produced by Baldwin-Lima-Hamilton Corporation, Lima, Ohio.

Aluminum Enamel by Perry & Derrick Company, Cincinnati, Ohio.

PERRY & DERRICK ALUMINUM ENAMEL on LIMA shovels and cranes

- resists abuse
- insulates
- improves appearance
- cleans up better

These huge cranes and shovels are designed to take a lot of rough treatment, and so is aluminum enamel. That's one reason why aluminum enamel is specified by Lima. The company finds that aluminum enamel has excellent resistance to the dust, dirt, bumps and abrasion encountered in strip mines, quarries and other rugged operations. Moreover, aluminum enamel provides a clean, bright appearance that reflects the heat, helps to insulate the cabs. It cleans up better, looks better longer than other paints.

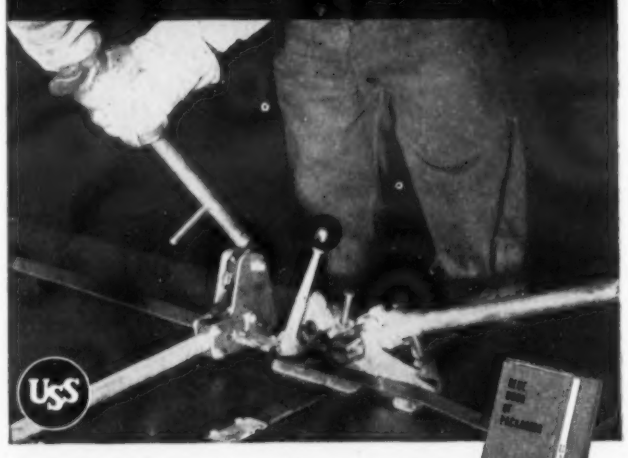
ALCOA does not make paint, but ALCOA Aluminum Pigments are used in more aluminum paints than any other brand. Special formulas have been developed by your paint manufacturer to solve individual problems. Paints made to these formulas actually cost you less, last longer, give utmost protection against heat, cold, sun, rain, smoke and fumes.

WRITE US TODAY for our two FREE BOOKLETS, *Painting With Aluminum* and *Aluminum Asphalt Roof Coatings Make Time Stand Still.* Contain important information on proper application and selection of aluminum paint and aluminum asphalt coatings . . . answer many industrial painting questions. Write for your free copies today. PAINT SERVICE BUREAU, ALUMINUM COMPANY OF AMERICA, 1788-F Alcoa Bldg., Mellon Square, Pittsburgh 19, Pa.

ALCOA ALUMINUM
ALUMINUM COMPANY OF AMERICA

▲ For more details circle NED-242 F5 on enclosed inquiry slip ▲

Want to cut packaging costs?



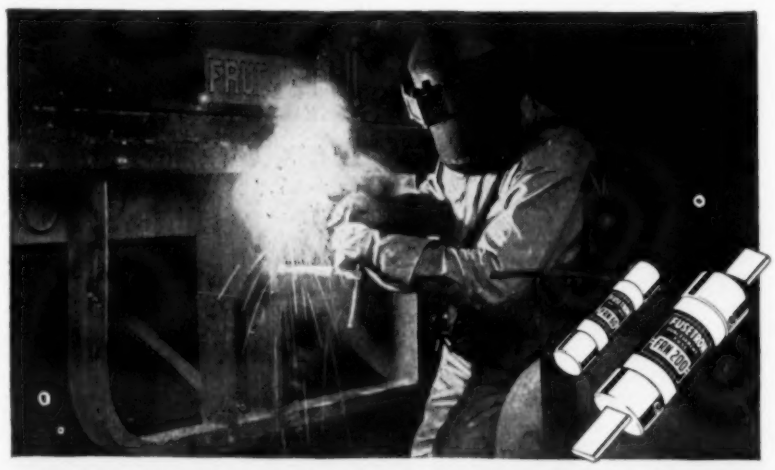
Learn how by writing for your **FREE** copy of **USS GERRARD'S** new 36-page Blue Book of Packaging — today!

GERRARD STEEL STRAPPING DIVISION, UNITED STATES STEEL CORPORATION
4717 South Richmond Street, Chicago 32, Ill.

USS GERRARD
ROUND STEEL **STRAPPING** FLAT STEEL
UNITED STATES STEEL

▲ For more details circle NED-248 F5 on enclosed inquiry slip ▲

"OUR WELDING MACHINES WERE REPEATEDLY BEING SHUT DOWN . . . *until we changed to Fusetron Fuses"*



"They eliminated production losses due to needless fuse blows."

"Our shop is service headquarters for Fruehauf's Detroit operation. Trucks, tractors and trailers come in for repairs. It's our job to have them rolling — and fast!

"We were having trouble with ordinary 60 amp., fuses constantly blowing on our 12 welding machines.

"Since many major repair jobs require welding, these shutdowns were a serious problem.

"In an effort to avoid these shutdowns, we installed Fusetron fuses. Since changing, there hasn't been any needless fuse blows on our welders."

Clyde Parkins Chief Electrician
Detroit Branch—Fruehauf Trailer Co. Detroit, Mich.

• Fusetron fuses do more than help increase production

They guard circuits and equipment against serious damage caused by electrical faults — and they cut maintenance cost.

• And Fusetron fuses give you greater safety

Their 100,000 amp. interrupting rating is adequate for today's network system capacities — and safe to meet future circuit growth . . . Write for bulletin FIS.

• For loads above 600 and up to 5000 amps. use BUSS Hi-Cap fuses

On 600 volts or less, they have unlimited interrupting capacity to handle any fault current. When coordinated with Fusetron fuses they will not open ahead of fuse nearest fault . . . Write for bulletin HCS.

Play Safe! Install FUSETRON Fuses and BUSS Hi-Cap Fuses throughout entire Electrical System!

BUSSMANN MFG. CO. Div. McGraw Electric Co.
University at Jefferson, St. Louis 7, Mo.

FUSETRON BUSS

▲ For more details circle NED-246 F5 on enclosed inquiry slip ▲

SAVE UP TO 85% ON GOVERNMENT SURPLUS

MAGNI-FOCUSER

Has fine ground lenses of optical glass. Neutralizes eye strain from close work. Binocular design gives third dimensional vision. Allows freedom of both hands. Wear over glasses. Plastic frame with adjustable headband.

SIZES: 20" focal lgth. 1½ power – 14" focal lgth., 1½ power, 10" focal lgth., 2½ power; 8" focal lgth., 2½ power ..... price each ONLY 10.50

OTC TOOLS

See our complete line. Pullers for Gears, Bearings, Wheels, Pulleys, Bushings, Shafts, etc.

NEW 10 TON HYDRAULIC PRESS

Use this Press in the Shop or take it with you on the job. Frame is 4" welded channel iron. Has 4½" stroke, 2½" diam. ram. Valve operates piston in both directions. Adjustable platform. Positive power Hand Pump with handle. 2000 PSI pressure gauge. 129.00

SIZE: 60" high 27" wide 29" base

HYDRAULIC EQUIPMENT

We stock over 100,000 Hydraulic Cylinders in 106 different types and sizes. These can be adapted wherever tremendous power is needed to push, pull, hoist, mould or drive, etc.

SPECIAL

Gives 29,000 lb. thrust using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lb. thrust with 3000 PSI. Can also be used on a low pressure air system. Has 4" bore; 18" stroke; 30½" long. Ideal for shop. Part No. 29 USED 29.95 NEW 43.95

HYDRAULIC HAND PUMP

Operating pressure 1500 PSI. Cap., 1.5 cu. in per complete cycle ... 12.75

HYDRAULIC ACCUMULATORS

A-2B FLOATING PISTON TYPE – 4"x 18" Built to stand 2,000 PSI 12.75

A-5 VICKERS – 10" dia. Ball type. Built to stand 2000 P.S.I. 24.50

NOTE: Stocks include bargains in Hydraulic Pumps – Valves – Motors – Boosters – as well as Oil, Water and Fuel Pumps, etc.

WORLD'S MOST AMAZING BARGAIN CATALOG

OVER 320 PAGES

Packed with SENSATIONAL VALUES in GOV'T SURPLUS – FACTORY CLOSE-OUTS – and GENERAL MERCHANDISE. Fully priced and illustrated. Thousands of items in Machine and Industrial Tools – Hydraulic Equipment such as Cylinders, Pumps, Valves, Motors, Fittings, etc. Bargains in Electric Motors, Generators, Blowers, Parts, etc. Also Hand and Power tools, Precision Instruments, Bearings, Hose Clamps, Winches, Foam Rubber, Microscopes, etc. ALL AT PALLEY BARGAIN PRICES – PRICED TO SELL!

Palley SUPPLY CO. 2263 E. VERNON AVE., DEPT. NED-6 LOS ANGELES 58, CALIF.

Pay by M.O. or check. P.O.'s accptd. from O&B firms. ½ deposit with C.O.D.'s. Prices FOB Los Angeles.

For more details circle NED-249 F5 on enclosed inquiry slip

Now—Lock Your Feed Rates to Protect Machines . . . Reduce Costs with the CROSS Flow Control Lock!

Only authorized personnel carry a key for the Cross Flow Control Lock! They set machine feed rate, then lock it.

Easy to install. Just remove valve nameplate and adjusting lever, reinstall over lock mounting plate.

Available for Vickers ¼" flow control valves and remote control panels.

For full details, write Dept. A-36,

- Eliminates Tampering
- Stops Costly Shutdowns
- Prevents Tool Abuse and Breakage
- Protects Machines Against Overloads
- Reduces Maintenance Costs

Established 1898 THE CROSS CO. DETROIT 7, MICHIGAN

For more details circle NED-250 F5 on enclosed inquiry slip

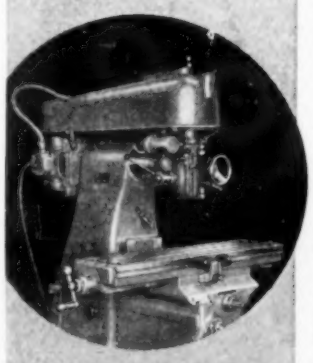
does MORE work... MORE easily

new POWER FEED HEAD U. S. Vertical Miller

Here's the new U. S. Vertical Miller with Power Feed Head—the head into which U. S. has built all the most wanted features without sacrificing traditional U. S. simplicity. Check its infinitely variable feed rate, its 800 pounds of down thrust on the quill, its supplemental hand feeds—it is the milling head that was designed to meet all shop needs.

Add to these the basic advantages of the U. S. Vertical Miller. You can easily see why it's the milling machine that "does more work more easily".

more versatile
Feed infinitely variable from .002" to .008" while in operation
greater capacity
5½" power quill travel; 800 lb. down thrust
more convenient
Supplemental hand feeds
increased rigidity
Enclosed hard chrome plated quill with internal lock



Write for descriptive folder

THE U·S·Burke MACHINE TOOL DIVISION 2 Brotherton Rd., Cincinnati 27, Ohio

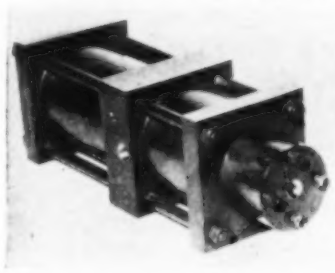
For more details circle NED-251 F5 on enclosed inquiry slip

LIGHT WEIGHT SOLDERING GUN rated 150 w for 120-v operation

Weighing only 8 oz, this Instant solder gun heats in a few seconds and has trigger control of heat. Alloy Lifetime ¼-in. tip cannot wear, corrode or bend. Long, thin reach permits soldering in relatively inaccessible places. It is rated 150 w and operates on 120 v ac or dc. Price is $7.95. Made by **Hexacon Electric Co.,** 145 W. Clay Ave., Roselle Park, N. J.

For more details circle NED-252 F5 on enclosed inquiry slip

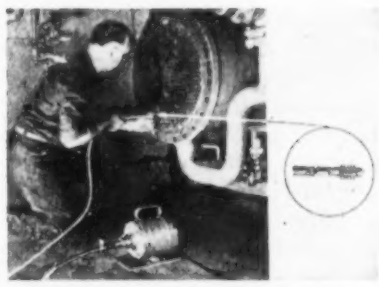
BOOSTER CYLINDER for air and hydraulic uses



Fluid pressure can be built up to 1951 psi using an input pressure of 100 psi, or up to 1660 psi using an input of 80 psi, with this air and oil-operated booster cylinder. It will develop a ratio of 19.7. The 5-in. air cylinder drives a 1⅛-in. hydraulic ram which in turn delivers 0.994-cu in. per inch of stroke. Cylinder return is by air action. Booster cylinder can be used where heavy concentrations of power are required for such operations as punching, pressing and clamping. It maintains pressure indefinitely. Other sizes can be produced to specification. Made by **Airmatic Valve, Inc.,** 7317-A Associate Ave., Cleveland 9, O.

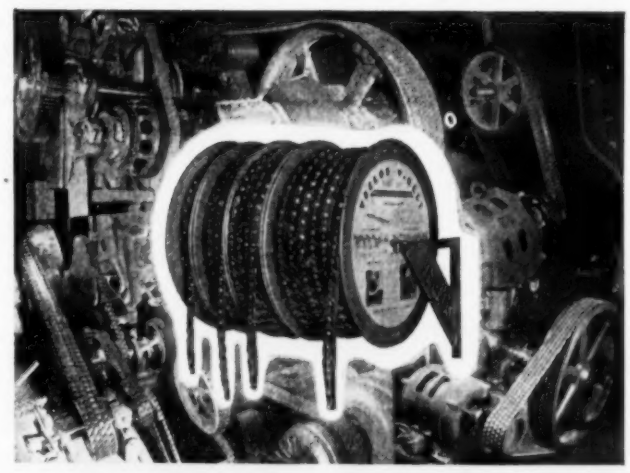
For more details circle NED-253 F5 on enclosed inquiry slip

TUBE CLEANER is electrically driven type



Rapid removal of algae, slime and mud deposits from air conditioning tubes is possible with this AB electrically driven tube cleaner. Lightweight portable cleaner is equipped with carrying handle and is powered by ¼-hp 3450-rpm motor rated 110/220 v ac, single-phase only. Several types and lengths of flexible shafts and metallic casings are available for tubes from ⅝ to ⅞-in. OD. Assembly is readily attached to motor by means of grooved spline connection. Made by **Thomas C. Wilson, Inc.,** 21-11 44th Ave., Long Island City 1, N. Y.

For more details circle NED-254 F5 on enclosed inquiry slip



THIS one V-BELT INVENTORY keeps your drives on the go

Four 100-foot reels of Veelos the adjustable v-belt—in the O, A, B and C widths can replace up to 316 different sizes of endless v-belt.

This 4-reel Veelos v-belt inventory is easy to maintain, stores in a space only 16 inches square, and is ready when you want it.

Switch to Veelos adjustable v-belt—the one v-belt that keeps your drives on the go. See your Veelos distributor. Write for your copy of the facts-packed Veelos Data Book.

VEELOS THE BALANCED LINK V-BELT

MANHEIM MANUFACTURING AND BELTING CO. 650 Manbel St., Manheim, Pa.

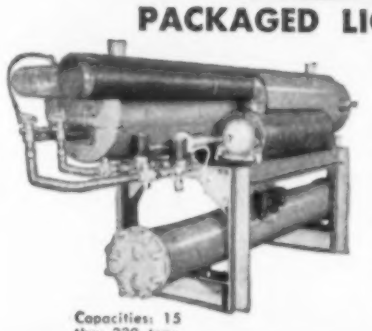
Adjustable To Any Length • Adaptable To Any Drive

For more details circle NED-255 F5 on enclosed inquiry slip

PROBLEM? AIR CONDITIONING INDUSTRIAL PROCESS COOLING

SOLUTION Acme SYSTEM-ENGINEERED FLOW-THERM®

PACKAGED LIQUID CHILLER



Capacities: 15 thru 220 tons.

Flexible "packaged" Flow-Therm units, with Acme components tailored to the job are suited to a wide range of air conditioning, heat pump, and liquid chilling applications. They are pre-piped, tested and ready for operation with the compressor of your choice.

A FEW TYPICAL EXAMPLES ARE:

AIR CONDITIONING
Offices; office buildings
Research laboratories
Special process rooms
Complete small plants

PROCESS COOLING
Anodizing and plating tanks
Plastic molders
Spot welding tips
Coolant cooling

Write for the Acme Flow-Therm Catalog No. 220.

ACME AIR CONDITIONING REFRIGERATION ACME INDUSTRIES, INC. JACKSON, MICHIGAN

Manufacturers of quality Air Conditioning and Refrigeration Equipment since 1919

For more details circle NED-256 F5 on enclosed inquiry slip

Tire Costs Go Down

—with Goodyear Job-Fitted Industrial Tires

WANT to get a 3-way benefit of longer tire life, less down time and better dealer service on industrial tires? Then start equipping your industrial trucks with Goodyears. They're *job-fitted* by tread design, by compound, and by size to deliver more performance with less down time. And you'll find your Goodyear Dealer is tops for fast service on both repairs and replacement orders. Check him and see—this week.

Smooth-Solid
All-Service Tread Xtra Cushion
All-Weather Tread
Rib All-Weather Pneumatic (Tubeless or Conventional)
Semi-Pneumatic Cushion

Our experts help solve your tough problems FREE

We maintain a staff of fully qualified technical experts to help you solve the tough industrial tire problems in your plant. For our free recommendations, write Goodyear, Industrial Tire Sales, Akron 16, Ohio.

Look for this sign; there's a Goodyear dealer near you. GOODYEAR TIRES

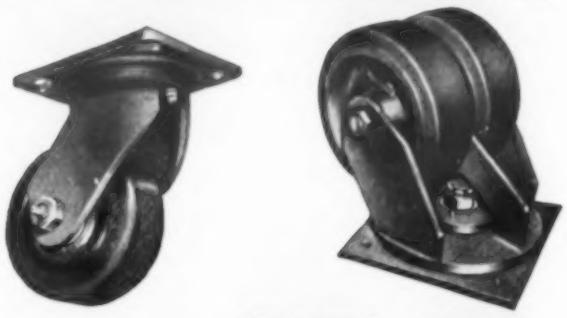
USE THE RIGHT TIRE FOR THE JOB—BUY AND SPECIFY

GOODYEAR INDUSTRIAL TIRES

All-Service, All-Weather, Xtra Cushion—T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-257 F5 on enclosed inquiry slip

FROM ANY ANGLE...



...THEY ARE THE *BEST!*

● Albion Industrial Casters are better-built to better serve you. Engineered to save you dollars and man hours by moving greater loads faster, safer, smoother . . . and to do it economically!

Albion casters are readily available in any size, style, capacity and wheel type. Make Albion your *one dependable* source for all industrial casters and wheels.

Represented in Canada by
C. J. McDONALD
Rear 1564 Queen St. W., Toronto

ALBION INDUSTRIES, INC.
ALBION • MICHIGAN

▲ For more details circle NED-258 F5 on enclosed inquiry slip ▲

Charm your hose

with PUNCH-LOK Hose Clamps

Doc Punch and Mr. Lok say... "See your nearby Punch-Lok distributor"—or write direct for product and price information.

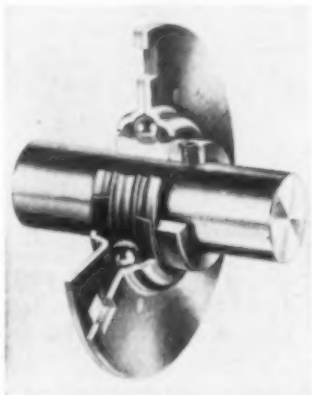
PUNCH-LOK Company

5645

Dept. A, 321 North Justine Street, Chicago 7, Ill.

▲ For more details circle NED-259 F5 on enclosed inquiry slip ▲

SHAFT BEARING SUPPORT for light load, slow speed uses

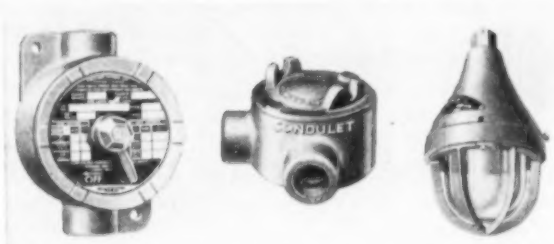


Designed for shafts supported by sheet metal members, the Aetna Adapter bearing handles relatively light loads and slow speeds. The packaged, prelubricated unit has a flange which actually is the outer bearing race. It is bolted in place and the shaft is slipped through and secured by an eccentric locking collar. Maximum capacities are 1000 rpm and loads of 200 lb. Flexible self-contouring grease-resistant seal provides a permanent, positive contact. Self-aligning bearing compensates for mounting inaccuracies, shaft or structural member deflections and misalignment up to ⅛-in. per foot. Made by **Aetna Ball & Roller Bearing Co.**, 4611 Schubert Ave., Chicago 39, Ill.

▲ For more details circle NED-260 F5 on enclosed inquiry slip ▲

LIGHTING SYSTEM for use in hazardous areas

Class I, groups A and B hazardous areas where acetylene and hydrogen are present can be equipped with a complete lighting system which is UL-approved.



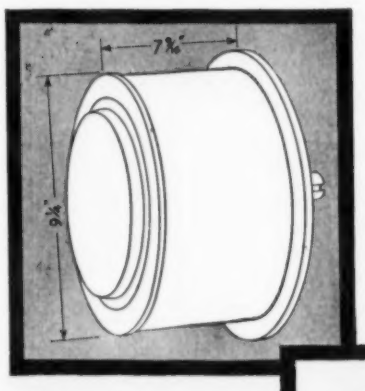
System consists of 150 and 200-w EVA 295 pendant lighting fixtures, EAB junction boxes, FSPC tumbler switches, EYS seals, UNY unions and EC series flexible couplings and flexible fixture hanger supports. Individual units are similar in appearance and size to certain other Crouse-Hinds explosionproof fixtures and fittings. Heavy heat and impact resistant globe is used. Fixtures take 150-w PS-25 and 200-W A-25 or PS-25 lamps. Made by **Crouse-Hinds Co.**, 7 North St., Syracuse, N. Y.

▲ For more details circle NED-261 F5 on enclosed inquiry slip ▲

Nesting-Stacking Boxes & Baskets

Chas. Wm. Doepke Co.—How an integrated plant-wide parts handling system can be custom-tailored to individual requirements using standard NesTier boxes and baskets, Rollover hoppers, hopper rack assemblies and shelf racks is related in 8-page illustrated catalog DN-1000. Versatile units can be used singly or in combinations.

▲ For more details circle NED-262 F5 on enclosed inquiry slip ▲



PANCAKE POWER BY *Peerless*

This compact motor crams 1 HP—1,750 RPM into a space 7-9/16"x9¼". It drives a lathe. It's single phase . . . totally enclosed . . . does the job perfectly.

Let us tackle your next motor problem. Teamwork engineering—our engineers working with yours—will produce the one motor that powers your product best.

Emblem of Business Character
Rice Leaders of the World Association

ELECTRIC MOTOR DIVISION
THE *Peerless-Electric* COMPANY
FANS · BLOWERS · MOTORS · ELECTRONIC EQUIPMENT
1506 W. MARKET ST. • WARREN, OHIO

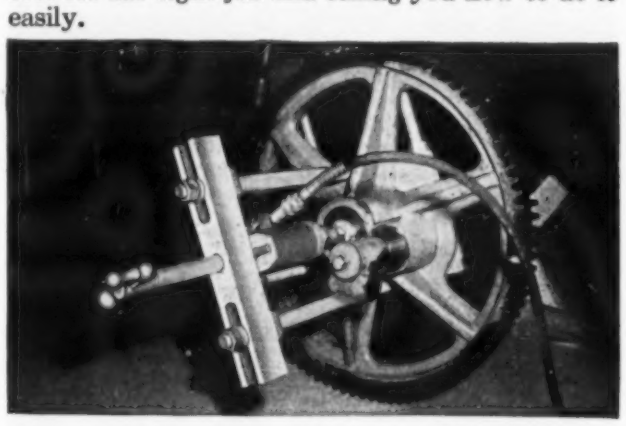
▲ For more details circle NED-263 F5 on enclosed inquiry slip ▲

DO YOU HAVE A PULLING PROBLEM?

Important information that will help save time, parts and tools on every job

Pulling and installing jobs are in many cases an unnecessary headache. Without proper tools, expensive parts and equipment are broken and machinery is down for long periods of time.

This is unnecessary for there are inexpensive and practical pulling tools to do every job quickly and safely. We can help you by suggesting the right tool for the right job and telling you how to do it easily.

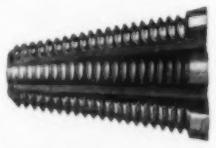


Pullers as small as your hand or up to a 100 ton hydraulically operated tool are available to you in the OTC line. Here a 50 ton hydraulic ram is pulling a drawing gear on a paper shearing machine. Get the answers to your pulling problems by writing OWATONNA TOOL COMPANY, 436 Cedar St., Owatonna, Minn. *Advt.*

▲ For more details circle NED-264 F5 on enclosed inquiry slip ▲

Ground shank type thread milling cutter for threading two diameters at the same time.

Continental shank type high-speed steel ground thread milling cutter.



Tapered, shell type multiple thread milling cutter.

Shell type multiple thread milling cutter for machining a special radius form.

TO MILL PRECISION THREADS ON PRODUCTION PARTS

CTW THREAD MILLING CUTTERS are precision ground to produce accurate threads with a fine finish. They're form-relieved for easy sharpening. Made of best type high-speed steel, hardened in our own shop.

Call in your local Ex-Cell-O representative—or send tool or part print to Continental for a quotation.

54-47

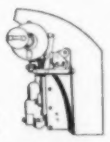
CONTINENTAL TOOL WORKS
Division of
EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

CTW STANDARD AND SPECIAL CUTTING TOOLS, BROACHES, BROACH FIXTURES.

▲ For more details circle NED-265 F5 on enclosed inquiry slip ▲

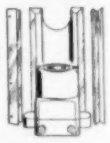
only FEDERAL has

so many big features!



• **Patented Brake Design.** Automatic release, if desired.
• **Solid Web-Type Flywheels.** An important safety factor.
• **Non-Repeat Clutch.** A feature exclusive with Federal.

• **Timken Bearing Flywheels.** Eliminate wear on shaft.



• **Longer "V" Ways, Gibs.** Hand-scraped to perfect alignment.

No. 7 Flywheel type. Capacity, 80 tons

plus
• OVERSIZED CRANKSHAFTS
• GENEROUS SHUT HEIGHT
• FRONT OPERATED RECLINE

Here are important features that give FEDERAL users a definite edge, production-wise and cost-wise. These rugged, precision-built presses boost output, eliminate accidents. Offered in four major classes—from 6 to 95 tons. *Write for new catalog today!*

THE FEDERAL PRESS COMPANY
506 Division Street, Elkhart, Indiana

FEDERAL Geared Flywheel PRESSES

30 Years of Quality Construction

▲ For more details circle NED-266 F5 on enclosed inquiry slip ▲

LIGHTNING-FAST

ELECTRO PUNCH

FOR LOW-COST PRODUCTION

Write—or phone Bigelow 4-6370—for folder showing complete line of Black & Webster solenoid-operated production tools.

BLACK & WEBSTER, INC.

Dept. 1, 445 Watertown Street, Newton 58, Mass.

SOLENOID-OPERATED PRODUCTION TOOLS

For more details circle NED-267 F5 on enclosed inquiry slip

CUT CORROSION COSTS

WITH

TYGON PAINT

Easily applied liquid plastic dries quickly to form a tough film that resists acids, alkalies and oils.

Used with Tygorust Primer, Tygon Paint simplifies maintenance painting—cuts surface preparation—outlasts conventional paints many times over.

WRITE FOR BULLETIN 750 420 D

U. S. STONEWARE

AKRON 9, OHIO

For more details circle NED-268 F5 on enclosed inquiry slip

– and now

TAPER-LOCK SPROCKETS

New "off-the-shelf" availability is now brought to roller chain drives. Taper-Lock bushings are available in sizes for most needs—no more boring sprockets to fit shafts. No turning and grinding of shaft necessary—Taper-Lock grips with firmness of a shrunk-on fit. Dodge roller chain is made to highest quality standards.

Complete range of B-type steel sprockets and roller chain available from stock — ½" to 1¼" pitch. For details write for Bulletin A-624.

DODGE MFG. CORPORATION
2100 Union Street, Mishawaka, Ind.

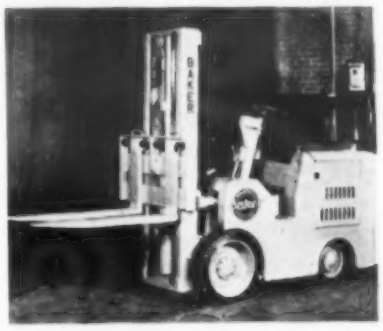
– and Dodge Roller Chain

DODGE

of Mishawaka, Ind.

For more details circle NED-269 F5 on enclosed inquiry slip

GAS-ELECTRIC FORK TRUCK lifts 3000 lb to height of 130 in.

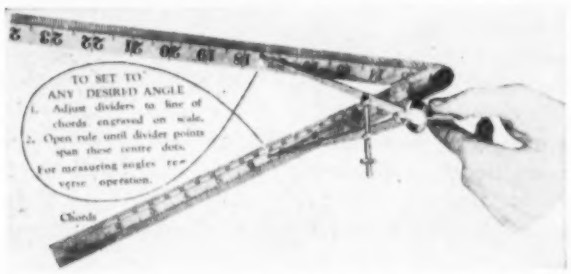


Variable - voltage generator which is integral with a gasoline engine is incorporated in 3000 - lb capacity model FD-30 Gas-O-Matic fork lift truck. Truck features a foot pedal-operated electrical inching control which permits high speed hoisting at low travel speeds. An accelerator pedal regulates travel speed without need for shifting gears. Power unit is a Hercules four-cylinder industrial engine. Low pressure hydraulic system has a continuous-flow pump supplying oil to lifting and tilting cylinders. Maximum full-load travel speed is 8 mph and full-load lifting speed is 40 fpm. Total lift height is 130 in. and turning radius is 73 in. Made by **Baker-Raulang Co.**, 1245 W. 80th St., Cleveland 2, O.

For more details circle NED-270 F5 on enclosed inquiry slip

JOINTED STAINLESS RULE also serves as protractor

This 2-ft jointed stainless steel rule, which also serves as a protractor, will aid mechanics and draftsmen in measuring longitudinal as well as angular dimensions.



Rule has accurate scale of chords engraved on one side from 0 to 120, advancing by half degrees. It also has two center dots, one on each blade by which rule can be set to any desired angle when using a pair of dividers. Graduations read in ⅛, 1/16, 1/32 and 1/64-in. Joint has spring tension which provides sufficient friction to hold angle setting rigid for scribing and lay-out work. Price is $3.50. Made by **George Scherr Co.**, Dept. NED, 200 Lafayette St., New York 12, N. Y.

For more details circle NED-271 F5 on enclosed inquiry slip

Standardized Eyelets

United Shoe Machinery Corp.—Used primarily as industrial fastening devices, the over 60 different standardized eyelets shown in this folder are cross-charted for quick identification of sizes. Lengths and widths are graduated in 1/32-in. graduations. Various applications are illustrated.

For more details circle NED-272 F5 on enclosed inquiry slip

DEMAGNETIZING UNIT for parts and tools

- A.C. CURRENT
- TABLE-TYPE
- HIGHEST QUALITY

All units are supplied with OFF-ON switches, A.C. indicating pilot lights and a 6-foot heavy-duty, rubber-covered cord with plug. When ordering, specify A.C. voltage.

PROMPT SHIPMENT — ORDER TODAY, DEPT. ND-65

Model	Depth	Width	Height	Weight	Price
A1-3	7"	3¾"	4"	15 lbs.	$33.00
A1-4	6"	11½"	4¾"	33 lbs.	50.00
A1-6*	13"	9"	7"	100 lbs.	130.00
A2-6*	13"	18"	7"	190 lbs.	182.00

* Stand extra $8.00 and $11.00

"Magna-Vise" — Sine Chucks

MAGNA-LOCK, INCORPORATED

BIG RAPIDS, MICHIGAN, U. S. A.

For more details circle NED-273 F5 on enclosed inquiry slip

More POWER FOR YOUR PACKAGING

STANLEY POWER STEEL STRAPPING TOOLS

for Production Line Strapping
Skid Strapping • Car Banding

STANLEY has the *right* steel strapping tool—power or hand—for faster, easier packing of boxes, cartons, crates, coils, bales, skids, pallets, etc. Write for free folder "Keep Your Production Lines Moving" and request the Stanley Steel Strapping Specialist to call and give you an on-the-job demonstration.

STANLEY INSURE IT – SECURE IT WITH STANLEY STEEL STRAPPING

STEEL STRAPPING DIVISION

THE STANLEY WORKS, 586-S LAKE ST., NEW BRITAIN, CONN.

Telephone: BAldwin 9-2021

STANLEY TOOLS • STANLEY HARDWARE • STANLEY ELECTRIC TOOLS
STANLEY STEEL STRAPPING • STANLEY STEEL

For more details circle NED-274 F5 on enclosed inquiry slip

For Best HIGH-SPEED Performance Use . . .

GENERAL WIDE-BASE PNEUMATICS

They save time • money • labor. Give you cost-saving advantages at all speeds.

General has pioneered every important advance in the field!

You can trust GENERAL'S complete line for the exact design for every purpose.

- More load capacity at low or high speeds
- Cushion equipment and loads reducing breakage and spillage
- Save high cost floors and floor surfaces
- Slow, even wear for long service
- High flotation for easier rolling over soft ground
- Rolls easier, smoother over all surfaces.

Available separately or in assemblies of Tires, Tubes and Wheels. Size O. D. 8" to 35"—200 to 7890 lbs. cap. for low or high speeds.

THE GENERAL TIRE

Rigid

CASTER FORKS

Wide-Base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

Swivel

SEND FOR CATALOG DEPT. 4

The GENERAL TIRE & RUBBER CO. Akron, O.

For more details circle NED-275 F5 on enclosed inquiry slip

OHIO STOCK GEARS

"OFF THE SHELF SERVICE"

For Faster Deliveries — Greater Values . . . join the hundreds of nationally known firms whose engineers have proved the value of Ohio Stock Gears.

Ohio Gears are not limited to a few widely used types and diametrical pitches, but are designed to form a complete line of spur, bevel, helical, worm, and worm gears — to meet the widest variety of power transmission requirements.

You profit substantially when you standardize with Ohio Stock Gears . . . You avoid delays and costly down time.

Perhaps we could solve your power transmission problem as we have done in the past for so many industrial firms. Write us direct.

ESTABLISHED 1915
THE OHIO GEAR COMPANY
1320 East 179th St. • Cleveland, Ohio

OHIO GEARS

For more details circle NED-276 F5 on enclosed inquiry slip

Bicycle saddle by **H. & F. Mesinger Mfg. Co.,** Bethel, Conn.

"Nomar" anchor by **Whitman & Robinson,** Weedsport, N. Y.

Blackstone Automatic Washer made by **Blackstone Corp.,** Jamestown, N. Y.

Products on the *MOVE* with Plastisols

Here's an anchor that won't mar boat decks, because it's coated with soft, resilient plastisol . . .

A tough, weatherproof bicycle saddle with a red leather grain, rivet heads—even the stitching—all one piece, molded from plastisol . . .

And a washing machine collector tank coated and sealed on the inside—the work side—with durable plastisol.

Does some product of yours have to operate under conditions like these? Sea water, sun, scalding water, soap, corrosion, chemicals, abrasion, flexing . . . plastisols based on BAKELITE Brand Vinyl Dispersion Resins take them all in stride.

Easy-flowing plastisols are simple to work with, either for coating or molding. Use them for dip-coating, slush molding, injection molding. They form with little or no pressure, without harm to an assembly's delicate components. A short bake fuses them into a firm, resilient material. They have good electrical insulating properties. They can be given almost any color you wish. Their finishes can be glossy or soft.

All these features result in a surprisingly low cost in terms of service and production advantages. For detailed information and technical assistance in applying plastisols based on BAKELITE Vinyl Dispersion Resins, write Dept. HN-119.

BAKELITE BRAND Vinyl Dispersion Resins

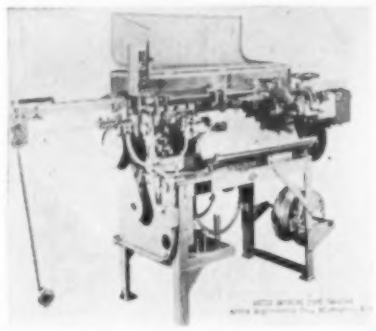
Plastisols used in these products were formulated by **Stanley Chemical Co.,** East Berlin, Conn.

BAKELITE COMPANY
A Division of Union Carbide and Carbon Corporation
UCC
30 East 42nd Street, New York 17, N. Y.

The term BAKELITE and the Trefoil Symbol are registered trade-marks of UCC

For more details circle NED-277 F5 on enclosed inquiry slip

WIRE PREPARATION MACHINE measures, strips, attaches terminals



Terminals can be attached to insulated wire leads in large quantities by the TA-20-S automatic combination wire stripping and terminal attaching machine. Practically any kind of terminal in strip form can be used. Attachment is available for marking finished wire leads with identification codes. Machine will mark the wire, measure, cut, strip and attach a terminal at one end in one automatic operation at a rate of up to 3000 finished pieces per hour. Solid or stranded wire leads from 3 to 250 in. long can be produced. Made by **Artos Engineering Co.,** 2751 S. 28th St., Milwaukee 46, Wis.

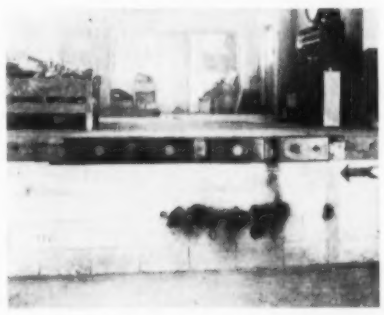
For more details circle NED-278 F5 on enclosed inquiry slip

SWEATBANDS made of perforated foam rubber

Perforations in the foam rubber Aircool sweatbands aid in evaporation of perspiration and circulation of air. Pads are reinforced with cotton backing and have adjustable elastic headbands. Foam rubber body is durable, tear resistant and soft. Available from **Pulmosan Safety Equipment Corp.,** Dept. NED, 644 Pacific St., Brooklyn 17, N. Y.

For more details circle NED-279 F5 on enclosed inquiry slip

RUBBER DOCK BUMPERS are both hard and resilient



Both hardness and resiliency are built into Kelco dock bumpers molded of compressed rubber. Bumpers withstand sharp edges on truck beds without cutting and are not damaged by oil, gas, water or weathering. They can be mounted right over wood with lag screws through two holes provided, or anchored to concrete docks. No angle iron mounts are required. Bumpers measure 18 x 8 x 2 in. and are made by **Kelley Co.,** Dept. NE-304, 316 E. Silver Spring Dr., Milwaukee 17, Wis.

For more details circle NED-280 F5 on enclosed inquiry slip

Announcing...
MOLYKOTE® MICROSIZE

The "finest" molybdenum disulfide lubricant available.

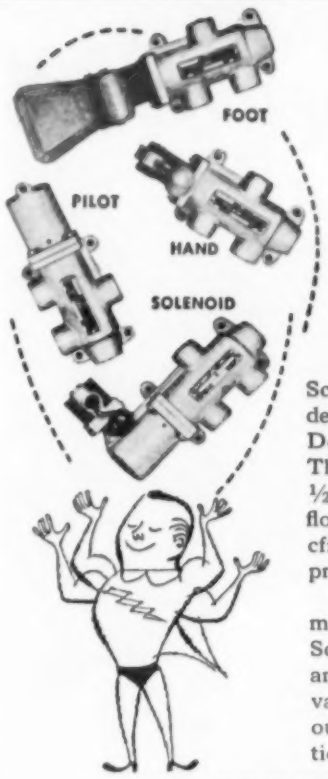
With average particle sizes of less than one micron, MOLYKOTE MICROSIZE has the physical ability to enter the smallest spaces between mating parts to fully exploit the basic lubricating features of MoS_2 at extreme bearing pressures and temperatures.
Economically, too, the covering ability of MOLYKOTE MICROSIZE is far superior to ordinary grades of molybdenum disulfide powder

"Information on MOLYKOTE appears in Sweet's Product Design File, 1955, Section C."

For more detailed information, write today for our Bulletin 104.

THE ALPHA CORPORATION
65 Harvard Ave. • Stamford, Conn.

For more details circle NED-281 F5 on enclosed inquiry slip



You get **Flexible Control** with **Schrader® 4-WAY VALVES**

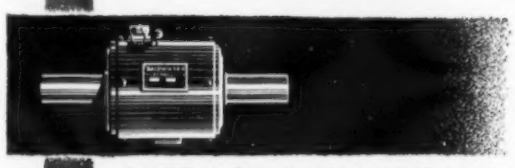
Schrader 4-way Valves are designed primarily to operate Double-Acting Cylinders. They are available in 1/4, 3/8, 1/2, and 3/4 N. P. T. sizes, with flow capacities from 160 to 425 cfm free air at 100 psi inlet pressure.

Long service with minimum maintenance is assured by Schrader's simplified design and sturdy construction. The valves may be serviced without disturbing pipe connections. Write for catalog.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue, Dept. W-6, Brooklyn 38, N. Y.

For more details circle NED-282 F5 on enclosed inquiry slip

Ultra-sensitive SR-4® Torquemeter speeds design of more efficient engine air cooling systems

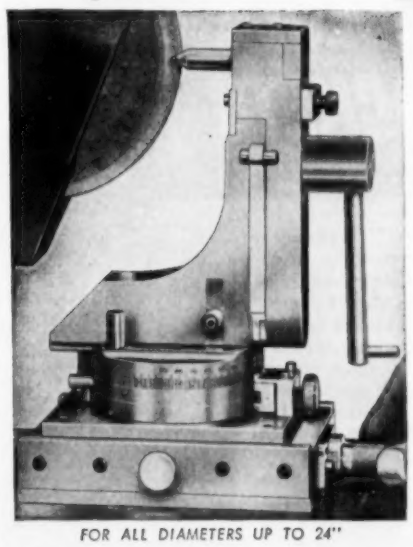


Dean & Benson Research engineers get highly accurate measurement of minute power changes with a Baldwin SR-4 Torquemeter . . . a big assist in designing more efficient engine air cooling systems. Why not investigate the many ways you can use SR-4 devices for fast, accurate, economical measurement of torque, load or fluid pressure? Send today for our latest bulletins! Address Department 3429, Baldwin-Lima-Hamilton Corp., Philadelphia 42, Pa.

BALDWIN-LIMA-HAMILTON
Philadelphia 42, Pa. • Offices in Principal Cities
In Canada: Peacock Bros., Ltd., Montreal, Quebec

For more details circle NED-283 F5 on enclosed inquiry slip

Fluidmotion **WHEEL DRESSER for *FAST* RADII and ANGLE WORK of HIGHEST PRECISION**



FOR ALL DIAMETERS UP TO 24"

Fluidmotion Wheel Dressers make precision wheel dressing very simple. Complicated concave or convex work is done in a matter of minutes. For example you can set up two angles and a radius within 2 minutes. You can dress 2 angles tangent to a radius in one continuous motion.

THE ONLY DRESSER WITH MICROMETER FEED

J & S TOOL CO., INC.
876 Dorsa Ave.
Livingston, New Jersey

Write for Catalog F-53 Showing 6 models and applications

For more details circle NED-284 F5 on enclosed inquiry slip

specify standard UNBRAKO

Dryseal-Thread Pressure Plugs

Use them in place of ordinary pipe plugs, or wherever liquids and gases must be contained under pressure. UNBRAKOS seal without compound. They are made of the same high strength alloy steels, have fully formed threads and the same internal wrenching feature as other UNBRAKO socket screws. Standard sizes—1/16" to 1 1/4"—are stocked by authorized industrial distributors. Ask your UNBRAKO supplier for Bulletin 883. Or write STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

UNBRAKO SOCKET SCREW DIVISION SPS JENKINTOWN PENNSYLVANIA

For more details circle NED-285 F5 on enclosed inquiry slip

300% Sales Increase credited to ALLIS-CHALMERS Induction HEATING

Jambor Tool & Stamping Co., Milwaukee, Wisconsin, reports: "Since we installed a 25-kw Allis-Chalmers Induction Heater, increased preference for our king bolts has been amazing. Our sales are up 300%! What's more, material costs are down 10%."

Previously, Jambor made the king bolts of a low carbon steel. Though this material would outlast any heat-treated steel, competitors made an issue of the fact that it was file soft.

The Allis-Chalmers Induction Heater allowed Jambor to use a high carbon steel and heat-treat it to their own requirements.

What's your job?
If it involves hardening, soldering, annealing, brazing and/or heating — it will pay you to get all the facts. See how Allis-Chalmers Induction Heating can help you increase product preference, boost output, cut costs, minimize rejects. Contact your nearby A-C office, or write Allis-Chalmers, Milwaukee 1, Wis.

A-4555

ALLIS-CHALMERS

For more details circle NED-286 F5 on enclosed inquiry slip

Engineered MOLDED RUBBER PARTS

Serving the —
Aircraft
Automotive
Appliance
Machinery
Electrical & Electronic
Safety Equip.
Instrument
and other industries

ACUSHNET specializes in "precision" molded rubber parts engineered to specifications. Utilizing the most modern techniques our Engineering Staff constantly is developing new approaches to old problems. By ingenious mold designing and compounding, yesterday's skepticism of rubber for critical uses has changed to complete confidence in this versatile material for application in countless vital assemblies.

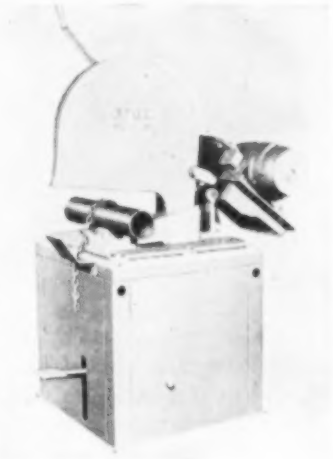
Acushnet PROCESS COMPANY

Send for your copy of the Acushnet Rubber Handbook.

Address correspondence to 782 Belleville Ave., New Bedford, Mass.

For more details circle NED-287 F5 on enclosed inquiry slip

ABRASIVE CUTTING MACHINE cuts wide variety of materials

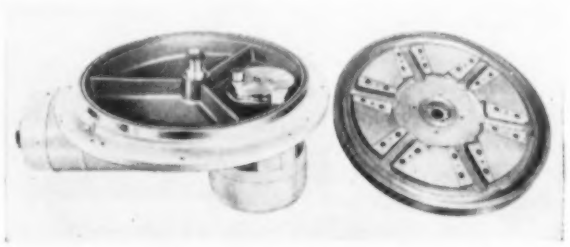


Speed-Cut abrasive cutting machine can cut soft or hard metals, leaving a smooth surface that seldom requires reworking. Among shapes and sizes that can be cut are thin-walled aicraft tubing, soil pipe, galvanized steel, angles, structural members and solid bars. It can sever a 4-in. cast iron soil pipe in 6 seconds. No. 14 machine has a 14-in. wheel and wheel speed of 3000 rpm for cutting 4-in. pipe or piece of 2-in. solid bar. No. 20 machine using a 20-in. wheel at 2300 rpm can cut 6-in. pipe or 2 1/2-in. solid rod. It can also use an 18-in. wheel. A foot-controlled chain vise holds material in the No. 20 machine, while the No. 14 machine has a hand-operated chain vise. Both incorporate permanently sealed double row ball bearings. Made by **Beaver Pipe Tools, Inc.**, 310 Dana Ave., Warren, O.

For more details circle NED-288 F5 on enclosed inquiry slip

AUTOMATIC INDEX TABLE is 6, 8 or 12 station unit

Available with 21 or 34-in. diameter tables, power driven automatic index tables can be provided in 6, 8 or 12-station models. They are of Geneva drive

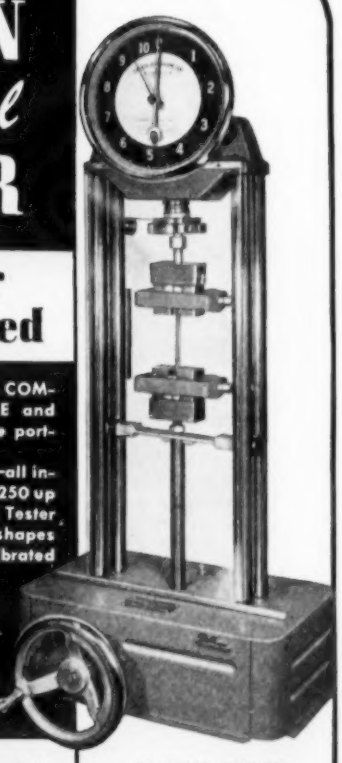


type and positive acting. Power is provided by a 220/440-v three phase 60-cycle motor through a bronze worm and gear reduction unit. Table revolves on a large double-row ball thrust bearing and is pressure lubricated. The 21-in. model is driven by a 3/4-hp motor, has a load capacity of 400 lb, an indexing cycle of 1.5 seconds, and can be equipped with up to 32-in. diameter top plates. With a work cycle of 3 seconds, it is capable of 800 operations per hour. The 34-in. table is powered by a 1-hp motor, will carry an 800-lb load, has a 2-second indexing cycle and can be equipped with up to 48-in. diameter top plates. Made by **Cleveland Tapping Machine Co.**, 1212 Camden Ave. S. W., Canton, O.

For more details circle NED-289 F5 on enclosed inquiry slip

DILLON Universal TESTER

Motorized or Hand Operated



Engineering skill at its highest! COMPRESSION-TENSILE-TRANSVERSE and SHEAR testing combined in one portable instrument.

7 different gauges available—all interchangeable! Capacities from 250 up to 10,000 lbs. Dillon Universal Tester handles rounds, flats or special shapes and—for split accuracy—is calibrated with Proving Ring certified by U. S. Bureau of Standards. Has maximum hand, self-aligning grips, ball bearings. America's most popular low-priced tester! Write for illustrated brochure.

W.C. DILLON & CO., INC.
14620NE KESWICK STREET
VAN NUYS (Suburb of Los Angeles)
CALIFORNIA

GRIPPING FIXTURES AVAILABLE FOR ALL ASTM OR FED. SPECS.

For more details circle NED-290 F5 on enclosed inquiry slip

Edmont Case No. 479: Handling steel on various operations. Edmont No. 30 plastic palm coated gloves outwore canvas 10 to 1 and saved over 80% in replacement costs.

Job-fitted gloves outwore canvas 10 to 1

No. 30 palm coated, one of 54 styles

You can save money for your company or your employees, and reduce hand injuries, with gloves designed for your work. For handling all types of abrasive, sharp or slippery materials, or where oil, grease, acids, caustics, solvents or thermal extremes are present, modern Edmont job-fitted gloves far outwear old-fashioned canvas, leather or ordinary coated gloves, and average 40% to 70% cost savings. They also result in easier work handling.

FREE TEST OFFER: Send description of your operation. Without charge, we will send recommended gloves for you to test.

Edmont JOB-FITTED GLOVES

Edmont Manufacturing Company, 1240 Walnut Street, Coshocton, Ohio

For more details circle NED-291 F5 on enclosed inquiry slip

For better small tube maintenance

ELLIOTT TUBE CLEANERS AND EXPANDERS

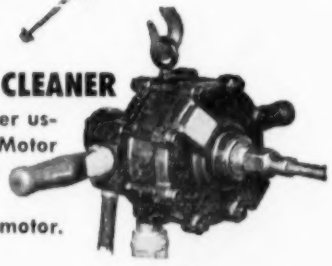
NEW ELLIOTT TUBE GAGE

Measures inside tube diameters in .001". A quick, guide for setting tube expanders for condenser and heat exchanger tubes. Three point contact of hardened steel balls insures accurate measurements.

ELLIOTT TUBE EXPANDERS

Roll condenser and heat exchanger tubes quickly and accurately. Rotating, parallel self-feeding rolls insure good joints. For tubes 1/2 in. through 1 1/2 in., 16 gage.

ELLIOTT CONDENSER CLEANER



Direct-drive air-driven cleaner using shaft and drill heads. Motor supported outside the tube by overhead pipe.
Also available with electric motor.

ELLIOTT JIFFY GUN

Shoots nylon or rubber plugs through small tubes for rapid cleaning. Operated by inserting nozzle into tube end and pushing.

ELLIOTT 600 Series Cleaners

For straight and curved small tubes. Air or steam driven motors. Can be equipped with expanding brushes and scraper heads.

YS-1

Write for Descriptive Bulletin Y-38
Address Elliott Company, Lagonda Division, Springfield, Ohio

ELLIOTT Company

STEAM TURBINES • MOTORS • GENERATORS • DEAERATING HEATERS • EJECTORS • CONDENSERS • CENTRIFUGAL COMPRESSORS • TURBOCHARGERS • TUBE CLEANERS • STRAINERS

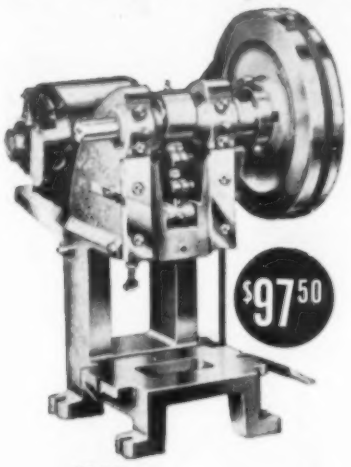
For more details circle NED-292 F5 on enclosed inquiry slip

CUT COSTS

with

ALLEN

Punch Press



$97.50

2-Ton Power Bench Type

less Motor

- Powerful
- Dependable
- Economical

FREE CIRCULAR

Fully Guaranteed
Order TODAY
Price $97.50 F. O. B., Clinton, Mo. (Includes motor bracket, V-belt, motor pulley, less motor)

For light work — stamping, forming, riveting — metal, fiber or other material.

Overall height 20-¼" . . . Base size 9" x 8¼" . . . Die bed 6¼" x 8" . . . Ram face 1½" x 3½" . . . Ram stroke ¾" . . . positive ¾" ram adjustment . . . sturdy, single pin, non-repeat hand lever clutch . . . V-belt drive . . . weight 105 lbs.

Requires only 1/3 H.P. motor.

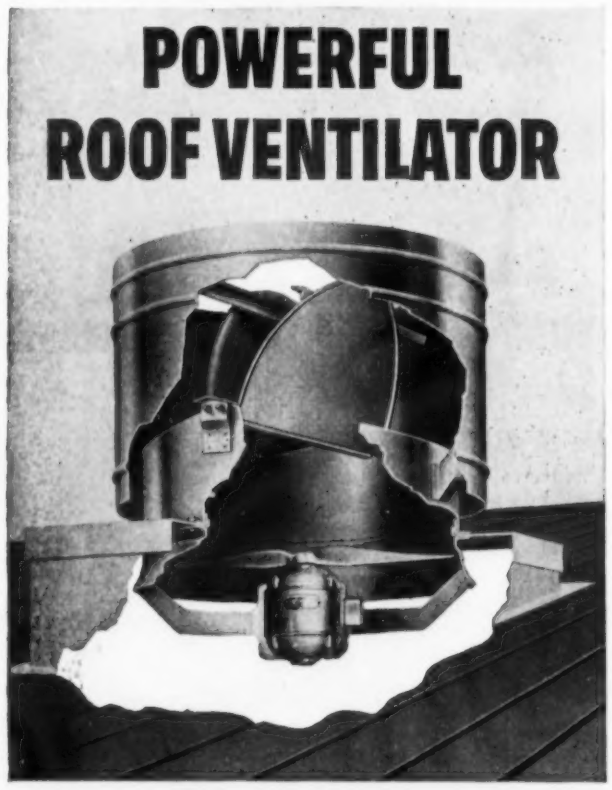
The machine of a thousand uses! Adequate for many types of work now done on large presses at greater expense.

Dealer Inquiry Invited

Alva F. Allen • Dept. NED • Clinton Mo.

▲ For more details circle **NED-293 F5** on enclosed inquiry slip ▲

POWERFUL ROOF VENTILATOR



PROPELLAIR

SKY-BLAST®

2820 to 78800 CFM Certified Air Delivery

This powerful roof ventilator with famed airfoil propeller scoops up heat, moisture, dust, fumes . . . blasts them high into the outside air. Powered by Robbins & Myers *All-Weather* Motor, the Propellair Sky-Blast is dependable, economical, efficient and maintenance-free.

Certified Ratings PFMA

SKY-BLAST FEATURES

- Constant performance regardless of winds
- Easy to install on all roofs
- Patented leak-proof automatic butterfly damper assembly
- Rugged all-steel galvanized construction
- Low silhouette for minimum roof stress
- Backed by more than 20 years of research and engineering

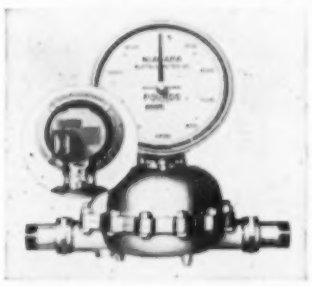
Write for Bulletin 680-N

PROPELLAIR®
DIVISION OF ROBBINS & MYERS • INC.
SPRINGFIELD • OHIO

Man Cooler Direct Drive Tubeaxial Vaneaxial Extended Shaft

▲ For more details circle **NED-294 F5** on enclosed inquiry slip ▲

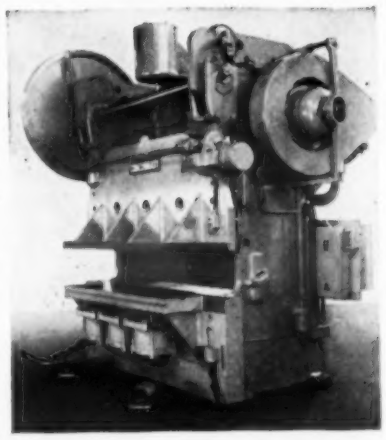
LIQUID METER with explosionproof electric contact



Liquids can be safely measured in hazardous atmospheres by the explosionproof Electricontact meter which incorporates an electric shut-off. Standard meter has a register containing an electric switch designed to complete an electrical circuit after passage of a predetermined quantity of liquid through the meter. Model EX-AR Micro Switch carries Underwriters' listing for use in Class 1, Group C and D and Class 2, Groups E, F and G hazardous atmospheres. This construction is available on Niagara meters for all liquids for which they are built, including cold and heated water, water-base liquids, oils, solvents and corrosive chemicals. Access plate permits adjustment of switch closing points after meter is assembled and electrically connected. Made by **Buffalo Meter Co.**, 2941 Main St., Buffalo 14, N. Y.

▲ For more details circle **NED-295 F5** on enclosed inquiry slip ▲

PRESS BRAKE for shallow draw work



Built with a 36-in. wide bed and ram, shut height of 15 in. and 8-ft overall die surface, this All Steel press brake can be used for shallow draw work and various types of press operation. Six 12-in. air cushions are mounted on the underside of the bed, both front and back. The 17-ton machine is equipped with an air-electric clutch with automatic stop and nonrepeat device. Two foot pedals are arranged to operate as one unit or they can be operated separately. Two speed transmission operates at 13 and 30 strokes per minute. Stroke is 5 in. Made by **Cincinnati Shaper Co.**, Garrard & Hopple Sts., Cincinnati 25, O.

▲ For more details circle **NED-296 F5** on enclosed inquiry slip ▲

Applications of Magnets

Eriez Mfg. Co.—"Magnetic Ideas from Eriez" is a 24-page booklet which describes over 150 magnetic equipment installations that are solving problems involving unwanted iron in materials. Benefits discussed include increased production, prevention of fire and explosions, minimized machinery damage and assurance of product purity.

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fast . . .
positive . . .
economical

DECKER

MIDLAND WELD NUTS

COLD HEAD PROCESS

Decker Weld-Nuts are manufactured to meet your demands for a better, faster, more positive method of parts assembly. Like all Decker Industrial Fasteners, Weld-Nuts are produced via the *cold-head* process to assure a uniform quality and exceptional economy. Decker Weld-Nuts are available in three basic types and a broad range of sizes to meet every conceivable need.

Study your production applications now and see for yourself the many operations where Weld-Nuts could save your production time and dollars.

Then . . . write for sample fasteners, as well as your copy of Decker's new illustrated Industrial Fastener catalog!

OTHER DECKER INDUSTRIAL FASTENERS

Pipe Plugs
Clinch Nuts
Hex Nuts

DECKER MANUFACTURING CO.
ALBION MICHIGAN

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There's an Easier Way!

Break away from old fashioned cutting methods . . . save time, temper and patience. Now . . . zip through 3/16" aluminum, Fiberglas, plastics, plastic laminates, even 16-gauge steel, with minimum effort . . . maximum speed . . . with the KETT Panel Master Saw. Its performance is outstanding on metal laminates such as Mirawal, Mettwal, Met-L-Wood and Amorply. Two-inch diameter saw blades give full ⅜" depth cut. Leaves accurate, smooth milled edge that requires no sanding or finishing. Amazingly easy to use . . . extra rugged for long, hard service.

Powered by heavy duty, industrial type 110 volt AC/DC portable 5/16" capacity electric drill motor. Ball bearing equipped drive for smoother operation.

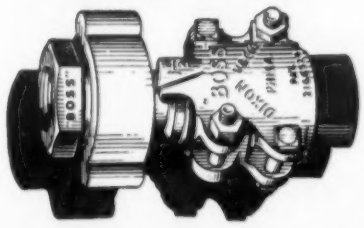
write for Catalog E-18

KS-3AM Panel Master Saw

THE **KETT TOOL COMPANY**
5 East Third St.
Cincinnati 2, Ohio

▲ For more details circle **NED-299 F5** on enclosed inquiry slip ▲

"BOSS"



WASHER TYPE FEMALE COUPLING STYLE W-16

For leakproof, durable connections on hose for every service—steam, air, gas, water, oil, butane, hydraulics—high or low pressure. Furnished with super-strong "Boss" Offset and Interlocking Clamps. All parts (except washer) steel or malleable iron, rustproofed. Deep corrugations on stem smoothly rounded to prevent damage to hose tubes. Sizes ¼" to 6", inclusive.

From Your Hose Supplier or Industrial Distributor

DIXON VALVE & COUPLING CO.
PRODUCERS OF *The Quality Line* COUPLINGS • NIPPLES • MENDERS • CLAMPS
"BOSS" "GJ-BOSS" "DIXON" "KING" "AIR KING" "DIX-LOCK"
PHILADELPHIA, PA. BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON

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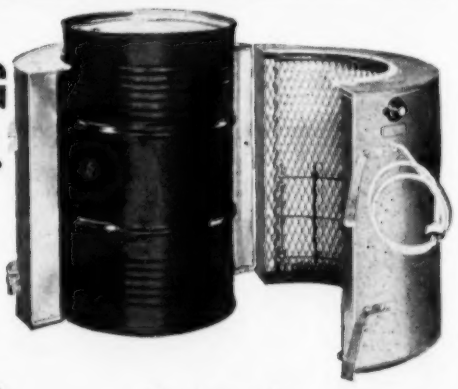
WARMS ANYTHING IN METAL DRUMS UP TO 450°F



Palmer *Automatic* **DRUM WARMER**

A PORTABLE ELECTRIC OVEN in two models for 55 or for 30 gallon steel drums.

Saves Time—Saves Money. Makes removal from drum by dipping, pouring or pumping, easy and convenient, for any viscous material that handles better when warm.

Operates automatically and economically. Two hinged halves, well insulated, fit around drum at point of use—eliminates handling hot drums. Supplied for 115, 208, 230 or 460 volts, single, or three phase. Catalogue, prices and specifications on request. Write today!

HAROLD L. Palmer COMPANY

2980 West Davison Ave., Detroit 38, Michigan, Phone TUlsa 3-1100

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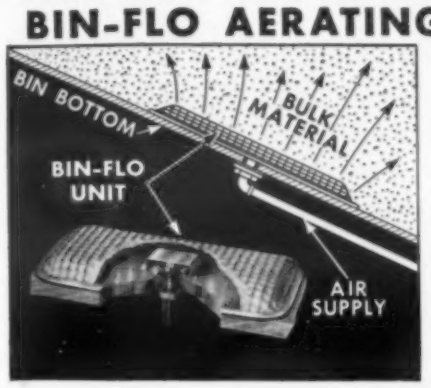
BIN-FLO AERATING UNIT



Provides Steady Flow of Dry, Finely Ground Materials which tend to bridge in storage. Uses only small amount low-pressure air.

BIN-DICATOR BIN LEVEL INDICATOR

For All Bulk Materials

signals change in level; automatically starts and stops filling and emptying equipment.

THE BIN-DICATOR CO.
13946-A Kercheval • Detroit 15, Mich.

NEW DETAIL DATA BOOK FREE

▲ For more details circle **NED-302 F5** on enclosed inquiry slip ▲

NEW WESTON miniature clamp Volt-Ammeter

with shock-mounted core magnet mechanism!

Lightweight and really pocket size... yet this instrument packs new ruggedness and dependable accuracy. Employs CORMAG® self-shielded mechanism with spring-backed jewels, which is shock-mounted in the sturdy Bakelite case. Window, too, is of shatterproof Plexiglas, wrap-around design. Only one easily read scale for all ranges and functions. Jaws take up to 1" round, or 1¾" rectangular conductors. Ranges—Current: 300/150/60/30/15/6 amperes a-c—Voltage: 600/300/150 volts a-c. At local distributors or write — WESTON Electrical Instrument Corporation, 614 Frelinghuysen Avenue, Newark 5, New Jersey.

Supplied in this sturdy, scuff-proof case with compartment for voltage test leads.

WESTON *Instruments*

▲ For more details circle **NED-303 F5** on enclosed inquiry slip ▲

HAT & COAT RACK for office or plant use

Available in six and twelve - person sizes, this coat and hat rack is of square tubular construction. Cantilever type shelves are ventilated. Skid domes on the base protect highly finished floors. Units are also available with casters for moving from place to place. Hardwood coat hangers have steel hooks. Units are finished in soft harmonizing gray baked enamel. Multiples can be set in line and back to back for increased capacity. Made by **Lyon Metal Products, Inc.**, 324 Clark St., Aurora, Ill.

▲ For more details circle **NED-304 F5** on enclosed inquiry slip ▲

HYDRAULIC LIFT TRUCK carrying capacity is 2000 lb

Capable of moving materials anywhere throughout a multi-storied building, the Morlift hydraulic lift truck has a 2000-lb carrying capacity. Its 2000-lb weight permits use on most elevators and movement on upper floors without exceeding safety specifications. Travel speed is 1 to 3 mph with two speeds forward and two reverse. Short turning radius permits use in a 6-ft aisle and maneuverability inside trucks, trailers, boxcars and other confined areas. Driver rides on a protected platform. Built-in charger services two 12-v batteries and plugs into any convenient outlet. All controls operate through magnetic contactors. Made by **John Morrell Mfg. Co.**, 222 Dundee Ave., Elgin, Ill.

▲ For more details circle **NED-305 F5** on enclosed inquiry slip ▲

Contour & Band Saw

Roll-In Saw Co.—Variable speed range, tilt table, wide throat, high clearance above table, chip-dust blower and overload controls are features of the Journeyman tool and die contour band saw. Accessory table traverse provides stock-cutting capacity up to 11 x 12½ in. with simple foot pedal control. Details are presented in 6-page catalog.

▲ For more details circle **NED-306 F5** on enclosed inquiry slip ▲

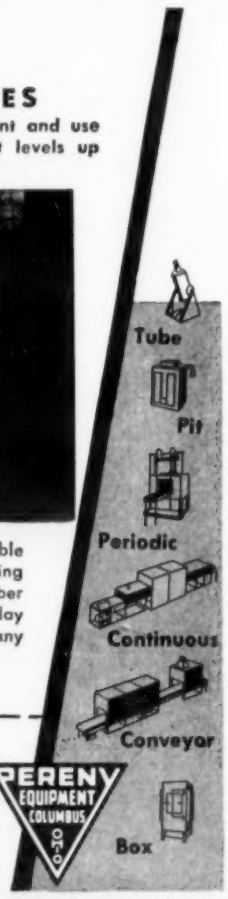
PERECO

"Completely Packaged"

ELECTRIC FURNACES

Controls built-in. Ready to connect to current and use in heavy and continuous duty at all heat levels up to 2500° F. Can be delivered promptly.

One of these space-saving furnaces is capable of working over the full range of heat-treating temperatures—eliminating need for a number of different temperature units. Write today for sizes available or details on the many other types of Pereco Furnaces or Kilns.



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PERENY EQUIPMENT CO.
Dept. G, 893 Chambers Rd., Columbus 12, Ohio
Export Office: Bessemer Bldg., Pittsburgh 22, Pa.

PERENY EQUIPMENT COLUMBUS OHIO

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STOP THAT NOISE!

Enjoy Peace and Quiet with BURGESS-MANNING SNUBBERS

They will stop intake or exhaust noises from air, steam or gases.

They are engineered to effectively correct your specific noise problem.

They are available with such plus values as: spark arresting—air cleaning—surge control—heat recovery—water separating, etc.

Send us your specifications for recommendations — no obligation

Sound Engineering

BURGESS-MANNING COMPANY
755 East Park Avenue, Libertyville, Illinois
Branch Offices: Dallas • Chicago

▲ For more details circle **NED-308 F5** on enclosed inquiry slip ▲

AT LAST!

A portable **Explosion-Proof** *industrial vacuum*

Here's the *first* industrial vacuum cleaner to combine portability, efficiency and *safety*.

Yes, its powerful ⅓ HP motor and all the electrical fittings are explosion-proof . . . *completely* explosion-proof!

You can safely use this revolutionary wet-dry vac amid explosive gases, vapors, dust, and in dozens of other situations where danger of explosion or fire had previously made use of a vac too risky.

Ideal for cleaning floors, walls, overhead pipe, machinery or stock bins where there is grease, chemicals or other flammable materials. Since it works equally well for wet or dry pickup, it's just the thing for cleaning combustible material from storage tanks.

Mills and elevators, chemical plants, petroleum refineries, gas plants, and distilleries are just a few of the locations where this new explosion-proof vacuum is especially suited.

Pictured above is a pilot model of this sensational new vacuum cleaner which will soon be in mass production.

MULTI-CLEAN *Method*

MULTI-CLEAN PRODUCTS, Inc. Dept. NE-65 2277 Ford Parkway St. Paul 1, Minnesota

▲ For more details circle **NED-309 F5** on enclosed inquiry slip ▲

Fix it so it *stays* fixed!

Part: Tang drive spindle.

Problem: Formerly, with AISI 6145, took 14 hours to make . . . then they broke in service, 3 to 6 per month.

Solution: With Carpenter No. 5-317, spindle is made in 6 hours (steel is heat treated at Mill). Costly downtime has been eliminated . . . 3 months without replacement is common.

Savings add up fast when machine parts give LONGER service. That's why Carpenter No. 5-317, chrome-nickel alloy steel, is being used so widely. Local stocks assure fast delivery.

helpful information→

This 12-page book gives complete working data on Carpenter No. 5-317. Also tells how you can do over 95% of all alloy jobs with just 2 steels.

The CARPENTER STEEL COMPANY

Dept. 655 118 W. Bern Street Reading, Pa.

Please rush me a copy of the Carpenter Booklet, "2 Steels Simplify".

Company_____

Individual_____ Title_____

Address_____

City_____ Zone_____ State_____

(please print)

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SAVE TIME—STEPS—MATERIALS with HANSEN ONE-HAND TACKER

Hansen Model T-4 fastening screens in radio-phono-TV

TAKE HANSEN TACKERS TO THE JOB! Hold materials with one hand. Tack them with the other. Fast operation — flexibility in use — easy portability — are combined in Hansen balanced-design. Self-contained for instant use.

Screens in radio-phono-TV — rubber dies to printer-slotter — plywood — insulation — metal lath — door and window screens — a few of thousands of every-day Hansen-tacked jobs.

A. L. HANSEN MFG. CO. REQUEST BOOKLET

5164 RAVENSWOOD AVE., CHICAGO 40, ILL.

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AS GOOD AS THEY LOOK

For New Equipment!

PIC STEEL UNIONS

Here's the ideal union for original equipment because it's bright, eye-appealing and speeds assembly and installation. Ends of heavy steel coupling stock are uniformly flat-sided, uniformly parallel to take open end wrenches. Special wedge type bronze seat for tightness. 100% zinc plating (even on threads) for rust protection. Pics are in line price-wise (They cost *less* than a galvanized, *no more* than a malleable union!)

For 150# Service — write for FREE Samples

DART UNION COMPANY

132 Thurbers Avenue, Providence 5, R.I.

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A Stockroom You Can Build Yourself!

SECTIONAL STACKBINS® give you the greatest flexibility and ease of installation ever devised for parts, tools, materials storage containers. You can set them up in minutes without tools! By combining bin sizes and number and size of openings, you get a storage system tailored to fit your particular needs. SECTIONAL STACKBINS give you maximum storage utility in minimum space. Available in 6 interstacking sizes.

For full information and prices, WRITE TODAY!

STACKBIN CORPORATION

1081 Main St., Pawtucket, R. I.

Mfd. & sold exclusively in Canada by: Wickware-Stackbin, Ltd., Ottawa

STACKBIN® SYSTEM *"Stacked and Still Accessible"*

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AIR COMPRESSORS deliver up to 2 cfm at 3000 psi

Compact, lightweight air compressors are designed for pressurizing hydraulic accumulators to any required pressure up to 3000 psi. They are powered with electric motor or gasoline engine. They can also be used for such purposes as recompressing nitrogen or charging portable cylinders. Two models in the 32 series provide up to 0.6-cfm of free air and have rated discharge pressure of 2500 psi. The 130 series includes two models which deliver 2 cfm of free air at rated discharge pressure of 3000 psi. Made by **Cornelius Co.**, 551 39th Ave. N. E., Minneapolis 21, Minn.

▲ For more details circle NED-314 F5 on enclosed inquiry slip ▲

FLUXING STICK for lead cable and pipe soldering

Activating agent contained in this stearine fluxing stick works with the stearine to completely dissolve metal oxides. This allows the solder to flow freely at all times. Stick is suited for lead cable, pipe and trap soldering and is packed in a metal tube for clean handling. Made by **American Solder & Flux Co.**, Nineteenth & Willard Sts., Philadelphia 40, Pa.

▲ For more details circle NED-315 F5 on enclosed inquiry slip ▲

ALLIGATOR TYPE CLIP miniature size is 1-1/16-in. long

Both cadmium plated steel and solid copper Mini-gator miniaturized alligator type clips are available for use on electrical and electronic equipment. They are 1 1/16 in. long. Red and black one-piece insulators of high dielectric vinyl plastisol fit skin-tight yet flex to permit full jaw opening to 3/16-in. Insulators cover the clips down to the nose to prevent shorts and shocks. Clip is designed for use with No. 20 wire or smaller. Made by **Mueller Electric Co.**, 1567L E. 31st St., Cleveland 14, O.

▲ For more details circle NED-316 F5 on enclosed inquiry slip ▲

Hold an eel with Super-Safe Grip PIONEER Stanzoils®

N-35 light weight all-neoprene 10½" length. Snug curved fingers. Super-Safe grip surface holds oily, slippery objects as if dry.

Non-slip grip on Stanzoils handles wet, slippery objects as if dry. Speeds work—cuts accidents. PIONEER Processed *milled* neoprene gives extra hours use in contact with oils, acids, alkalies, solvents—has higher tensile strength, greater tear resistance than any other oil-proof rubber. Only a liquid-tight glove gives positive physical protection from conditions causing dermatitis.

32 PIONEER styles, weights, sizes and colors. Send for Stanzoil catalog—shows quickly how to pick the best, most economical glove for each job.

The PIONEER Rubber Company 234 Tiffin Road Willard, Ohio

STANZOIL PIONEER

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Facts at your fingertips with DIEBOLD ROTARY CARD FILES

N-206-D1

FOR SIMPLIFIED HANDLING OF ACTIVE RECORDS

For the fastest and most economical handling of inventory, cost, production, sales, personnel, service and maintenance records . . . there is nothing to compare with the *new* Diebold Cardineer Rotary Card File.

It features ease of operation . . . encourages orderly purposeful work . . . and it saves you time and money. Users report savings up to 50% in time and space.

Diebold® INCORPORATED
1008 Mulberry Rd., S. E.
Canton 2, Ohio

Write today for complete information!

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For easiest maintenance use the versatile

GRINNELL-SAUNDERS DIAPHRAGM VALVE

The maintenance-saving design of Grinnell-Saunders Diaphragm Valves has accounted for important economies of labor and money, in hundreds of installations. The only part that will ever need replacement is the diaphragm, and that may last for years. To replace it is easy. You simply remove the four bolts holding the bonnet, leaving the body in the pipe line . . . remove the worn diaphragm, insert the new diaphragm . . . replace the bonnet and bolt it down. No refacing or reseating required . . . no packing glands to demand attention.

Originally perfected for air and water service, Grinnell-Saunders Diaphragm Valves are now widely specified for many other applications. They greatly reduce maintenance and replacement costs, especially in lines where corrosion, contamination, abrasion, clogging and leakage can be serious factors. Write today for the Grinnell-Saunders Diaphragm Valve Catalog . . . and assign your next valve problem to Grinnell.

GRINNELL

WHENEVER PIPING IS INVOLVED

GRINNELL COMPANY, INC.

EXECUTIVE OFFICES: PROVIDENCE, R. I.

SALES OFFICES AND WAREHOUSES IN PRINCIPAL CITIES

▲ For more details circle NED-319 F5 on enclosed inquiry slip ▲

FEEDS to 8-in. per MINUTE

WITH FASTER CUTTING MORE DURABLE SUPER CARBIDE DRILLS

Super Carbide Drills are *faster cutting*, because our special v-ground point breaks up metal structure easier, acts like a lead hole to permit a bigger bite. The tip blends into the spiral and flutes are polished to provide easier chip relief, less friction — for *cooler cutting, longer life*. And, the Super's radial-ground relief *reduces fractures*. Heavier carbide tip *cuts breakage*, provides *more regrinding stock*. Heavy land and web provide *much greater strength*. Easy to understand why Super Drills can maintain *feeds up to 8" per minute* (cast iron) and pare downtime losses.

This improved drill design is stocked by leading tool supply houses in every industrial area, in fractional, wire or letter sizes, with straight or Morse taper shanks and in eight types, solid carbide or tipped.

WRITE *NOW* FOR FREE, NEW 92-PAGE CARBIDE TOOL CATALOG

Super TOOL COMPANY

SUPER TOOL CO.

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5210 SAN FERNANDO RD. • LOS ANGELES 3, CALIF.

For more details circle NED-320 F5 on enclosed inquiry slip

Compare! No Other Lift Truck can equal the performance of Automatic's New "DOCKER"

- Shortest, most compact truck in its class!
- Lowest step height—best grade clearance!
- Top lift and travel speeds, maximum stability!

Best performing truck on the market for the trucking industry and other close-quarter materials handling, the new "Docker" is 5 ways superior! Overall length (less fork) of 53⅝" • step height of only 7" • lift speed of 65 FPM • grade clearance of 45% • turning radius of 55". *No other* truck of its type offers so much! The "Docker" provides greater stability, too, through 4-wheel suspension and a lower center of gravity. It is available in Mono-Lift or Duo-Lift, 1,000 to 3,000 lbs. capacities. Lease the "Docker" without 1¢ capital investment at amazingly low rates...or purchase it on deferred-payments after modest amount down...through exclusive "Earn-Its-Own-Way" Lease-Finance Plan. Write for details, today!

Automatic
WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS
61 W. 87th St., Dept. H-5, Chicago 20, Ill.

For more details circle NED-321 F5 on enclosed inquiry slip

AIR CYLINDER WITH CHOICE OF BUILT-IN VALVES

The Bellows Air Motor—the only air cylinder with *built-in* valve and operating controls — now offers a choice of six separate valving arrangements. Now the engineer can choose the method of valving he prefers and still have all the advantages that integral construction means: jet-quick action, compactness, sure-fire control, simple installation.

Learn more about this newest development in the Bellows Air Motor. Write for your copy of Bulletin CL-50, just off the press. Address Dept. NED-655.

The Bellows Co.
ESTABLISHED 1911
AKRON 9, OHIO 70LA

For more details circle NED-322 F5 on enclosed inquiry slip

GEAR MOTOR offered in range of output speeds

Equipped with parallel output shaft, model G-8 universal gear motor is available for any voltage up to 250 v with output speeds as low as 1 rpm. Unit is designed for loads up to 15 lb-in. torque. It can also be supplied with electric governor speed control, rheostat control, or with dynamic or mechanical brake. Made by **Rae Motor Corp.**, 2007 Kewaunee St., Racine, Wis.

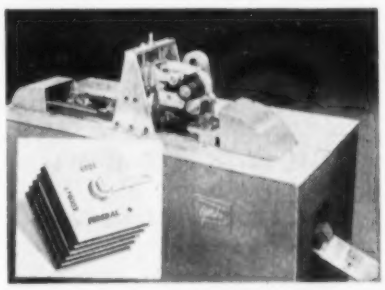
For more details circle NED-323 F5 on enclosed inquiry slip

HIGH SPEED COUNTERS indicate at 4000 counts per second

Having total count capacity of seven digits or up to 9,999,999, model 8003 fast industrial counter operates at speeds up to 4000 counts per second. It is actuated by pick-ups which can produce a single 10-v pulse of either positive or negative polarity for each event to be counted. These can be magnetic, piezo - electric, photocell, acoustic, pressure or strain-sensitive type, or of contact closure type. Register is designed to tally count of continuous, discontinuous, random or cyclic successions of events or passage of linear or liquid flow. Made by **Atomic Instrument Co.**, 86 Massachusetts Ave., Cambridge 39, Mass.

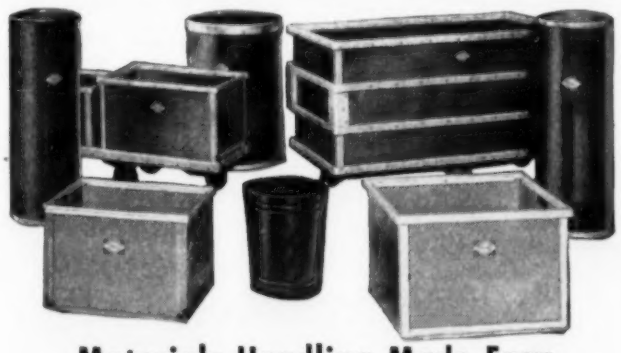
For more details circle NED-324 F5 on enclosed inquiry slip

MARKING MACHINE production-marks odd-shaped parts



Trademarks, code and lot numbers and other changeable identification legends can be imprinted on odd-shaped parts and products by a production line machine, custom-built to each user's specifications. Objects to be marked are fed manually and printed pieces are discharged into a tote box or on a conveyor. Opaque and permanent imprints are made, even where white and yellow inks are used on dark surfaces. Inks used are quick-drying, and reservoirs hold an 8-hour supply. Made by **Adolph Gottscho, Inc.**, 6C Terminal Rd., Hillside 5, N. J.

For more details circle NED-325 F5 on enclosed inquiry slip



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Simplify the storage and handling of your materials with Spaulding Fibre Receptacles. They're tough, light weight, shock-proof, resistant to impact and abrasion, will not splinter or corrode.

The Spaulding line includes boxes, baskets, barrels, trays, and trucks of all types. Most can be made to your order in the size and weight best suited to your needs. Send coupon for catalog today.

Spaulding

SPAULDING FIBRE CO., INC., Dover, N. H.

Please send me by return mail your catalog on Spaulding's complete line of Fibre receptacles.

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Address _____
City _____ Zone _____ State _____

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ALNOR PORTABLE PYROMETERS

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Alnor

PRECISION INSTRUMENTS FOR EVERY INDUSTRY

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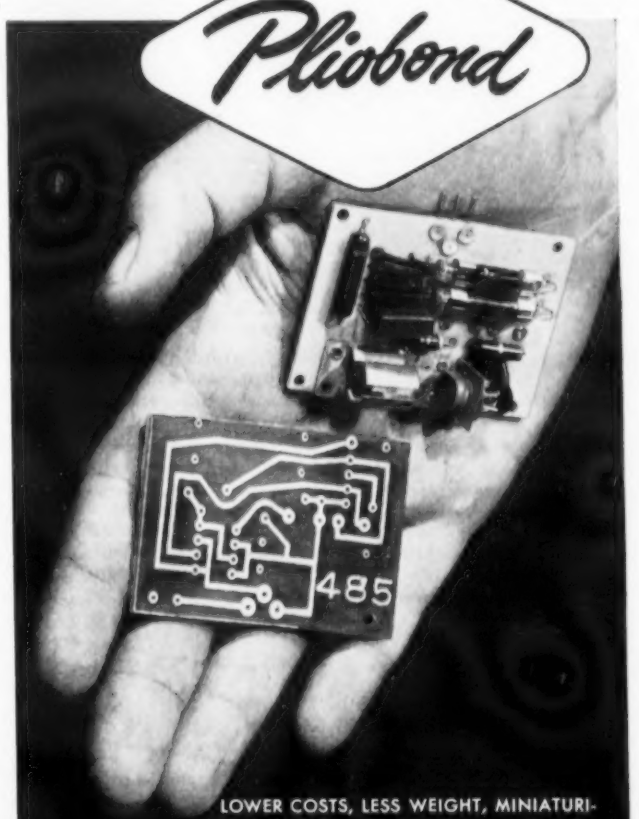
Another Adhesive Problem Solved with Pliobond



LOWER COSTS, LESS WEIGHT, MINIATURIZATION, for a variety of electrical assemblies, are now possible with printed circuits. These are made by bonding copper foil to the insulating base with PLIOBOND, then etching the metal away to leave the desired pattern. Photo courtesy Circuitron, Inc., Rockville, Conn.

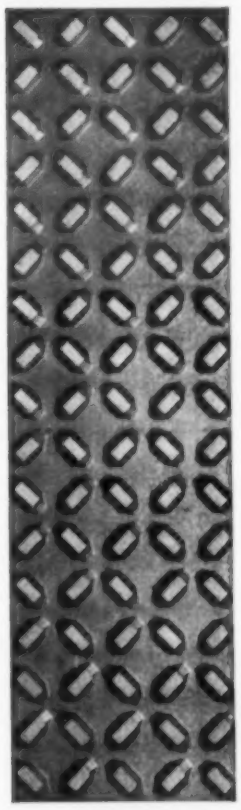
CHEMICAL GOODYEAR DIVISION

BONDING OF METALS to the base plastic by metalization processes can be scheduled on regular production runs *without an overpowering percentage of piece rejections*. That's the report on the use of PLIOBOND by Circuitron, Inc., pioneers in the manufacture of printed electrical circuits. PLIOBOND is the thermoplastic cement that "bonds anything to anything." Exhaustive tests proved PLIOBOND would give the consistently uniform, high-strength bonds needed in the fabrication of extremely fine wiring circuits or schematics where one poor spot could ruin the piece. For details on how PLIOBOND can help you, see your local industrial distributor or write to:

Goodyear, Chemical Division, Akron 16, Ohio

Pliobond—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-328 F5 on enclosed inquiry slip



Take a tip for safety's sake...

safe-tread

with Multigrip!

Don't wait until *after* a serious accident occurs! It will cost you less—in money and man-hours—to safe-tread with USS Multigrip Floor Plate right now.

Then you'll know that your workers are protected from slips and falls at all times—even when the floor is wet or oily. Be sure you don't overlook *any* potential danger spot, any area where a smooth surface may cause a slip.

Multigrip is easy to install, easy to keep clean. It makes a long-lasting, heavy-duty floor surface that won't crack, chip, rot or splinter. Can be used structurally or as a covering.

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COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL SUPPLY DIVISION, CHICAGO
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

USS multigrip FLOOR PLATE

Sold by leading distributors from coast to coast

UNITED STATES STEEL

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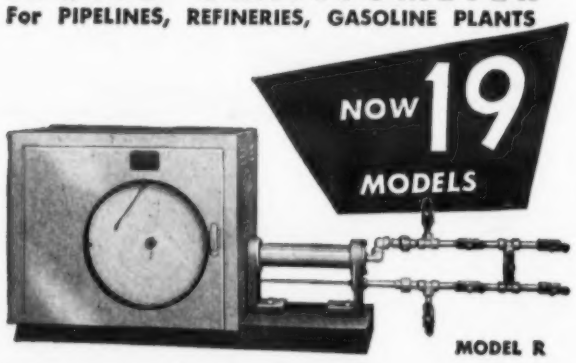
ARCCO-Anubis

LIQUID GRAVITOMETER

For PIPELINES, REFINERIES, GASOLINE PLANTS



This ruggedly built instrument of laboratory accuracy is ideal for quick checking and for continuous recording of Specific Gravity of liquids under line pressure. Changes in Specific Gravity of sample are recorded with a very minimum of time lag. Foreign liquids and gases are automatically purged from sample. No moving joints or stuffing boxes to cause friction or leakage. Temperature corrected, this precision instrument is adaptable to high pressures. Hundreds are in daily use in plants and refineries of major companies. Available in 19 Models for Recording, Signalling, Transmitting and Controlling. Send for Bulletin 111R-3.

AMERICAN RECORDING CHART CO.

AVAILABLE FOR EARLY DELIVERY

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FREE LAYOUT SERVICE

...assures better storage facilities for less money

Take advantage of Equipto's Free Layout Service to obtain valuable advice on the number and type of storage units to buy . . . complete floor plans and elevation drawings showing best way to arrange units within your allotted storage area. You will thus be able to make maximum use of your floor space, save steps, speed customer service, and simplify inventory and stock control.

If you would rather lay out your own facilities, send for fact-crammed, fully illustrated booklet, "How to Solve Your Storage Problems."

Both "assists" are further evidence of Equipto's primary concern with providing super-efficient storage facilities—not in merely selling equipment.

Equipto Division of Aurora Equipment Co.

690 Prairie Avenue, Aurora, Illinois

Steel Shelving . . . Parts Bins . . . Drawer Units

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METAL NAMEPLATES
pressure-sensitive adhesive backing

Application of Metal-Cal anodized and etched aluminum nameplates is by stripping the masking paper off the pressure - sensitive adhesive backing. They can be applied to any smooth, flat cohesive surface, including metals, porcelain, Bakelite, polystyrene, glass, plastics, wood, paints or enamels. They can be used for serialization, product identification, service labeling, catalog and parts numbering or dial and gage markings. Nameplates will not peel, chip or crack. Letters, characters and colors are part of the aluminum foil itself and therefore stay clear, sharp and easy to read under all conditions. Wide range of colors, plus aluminum, and lustrous or matte finishes are available. Offered by **C & H Supply Co.**, P. O. Box 338, Inglewood 3, Calif.

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RECORDING OSCILLOGRAPH
writing rate is 5 million ips

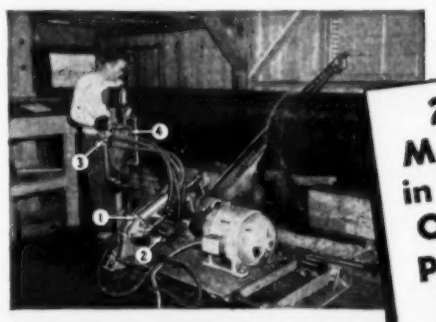
A writing rate of 5,000,000 ips is featured by type SC-16B cathode ray recording oscillograph. Frequency response is 0 to 200 kc. Records can be taken on continuously-driven 6-in. or 35 mm width film or paper at speeds up to 600 ips or on drum-type charts at speeds up to 6000 ips. Improved camera-type lenses increase trace definition. Aluminum case houses hinged chassis which affords accessibility. Made by **Hathaway Instrument Co.**, Dept. 2-G-1-N, 1315 S. Clarkson St., Denver 10, Colo.

▲ For more details circle NED-333 F5 on enclosed inquiry slip ▲

Lubrication Chart

E. F. Houghton & Co.—Handy wall chart contains lubrication recommendations for many industrial needs. Suggestions are given for such applications as hydraulic systems, spindles, air compressors, reduction gears, electric motors, oven conveyors and general uses. Chart is varnished for protection from dirt and smudges.

▲ For more details circle NED-334 F5 on enclosed inquiry slip ▲



Arrow No. 1 — NOPAK 6"x14" Model E Cylinder
Arrow No. 2 — NOPAK 4"x10" Model E Cylinder
Arrow No. 3 and No. 4—NOPAK ½" 4-Way Valve

2 Vital Movements in Deck Saw Operations Powered by NOPAK Cylinders

This carriage-type deck saw, designed and built by Elk Lumber Co. Medford, Ore., eliminates mis-cutting, and short logs reaching carriage.

8 foot chain-saw bar is raised and lowered by a NOPAK Model E, 6" x 14" Air Cylinder. Horizontal carriage movement of 10", powered by a NOPAK 4" x 10" Air Cylinder, permits operator to locate saw accurately to cut logs within minimum tolerance of ½". Both movements are controlled by NOPAK valves mounted at operator's station.

This is typical of hundreds of machine movements in which NOPAK Cylinders and Valves are used in all types of industry. For others, see the NOPAK Application Manual.

GALLAND-HENNING NOPAK DIVISION • 2755 S. 31st St. • Milwaukee 46, Wis.

Representatives in Principal Cities • Write For Engineering Catalogs

NOPAK VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE

A 7702-1/9 A A

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Here is the data you need to solve flexible metal hose application problems

FLEXON Catalog No. 147

In this new catalog you'll find specifications and application data on all types of Flexon metal hose — the most complete line available anywhere. It includes corrugated, interlocked, square locked and double groove types in a variety of metals and standard assemblies for specific services. Flexon Catalog No. 147 is a valuable addition to any maintenance file. Ask for your copy, today.

FLEXONICS CORPORATION

Formerly Chicago Metal Hose Corporation

1343 S. Third Avenue, Maywood, Illinois

Manufacturers of flexible metal hose and conduit, expansion joints, metallic bellows and assemblies of these components.

In Canada: Flexonics Corporation of Canada, Ltd., Brampton, Ontario

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CAN YOU THINK OF A BETTER WAY TO HANDLE MATERIALS?

CONVOY'S CHEMBOARD* SELF-STACKING TOTE BOXES *MAY BE YOUR ANSWER*

Convoy Boxes are LOW COST, STRONG and LIGHT WEIGHT . . . are made in a wide range of stock sizes and shapes. They weigh and cost less than 40% of steel.

*Chem-Board is Convoy's chemically impregnated corrugated board . . . flint-hard, rock-strong.

Here's an example of Convoy Self-Stacking Boxes speeding production, conserving space, saving money.

GET IN TOUCH WITH

CONVOY, INC.

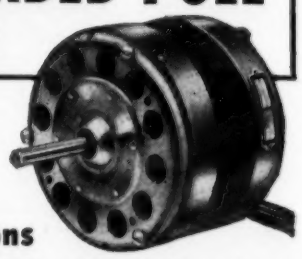
CANTON 6, OHIO

P. O. Station B, Box 216-N

STANDARD AND CUSTOM-MADE NESTING, STACKING, and VERTICAL-SIDED CHEM-BOARD TOTE BOXES

▲ For more details circle NED-337 F5 on enclosed inquiry slip ▲

New LOYD SCRUGGS 6-POLE SHADED POLE MOTOR



Perfect for Room Air Conditioner and Fan Applications

If you're looking for reliable custom-built motor service at stock motor prices, let Scruggs be your source of supply. Sample motor to your specs can be furnished immediately. New plant facilities now permit wider scope, quick deliveries, lower pricing.

Check These Quality Features

1. Copper-weld rotor for uniform performance
2. Long-life sintered bronze bearings
3. Extra large oil reservoirs
4. Extremely quiet running
5. Rotor electronically balanced
6. Double varnish impregnation
7. Design practically eliminates AC hum

You can stake your reputation on SCRUGGS MOTORS

THE *Loyd Scruggs* COMPANY

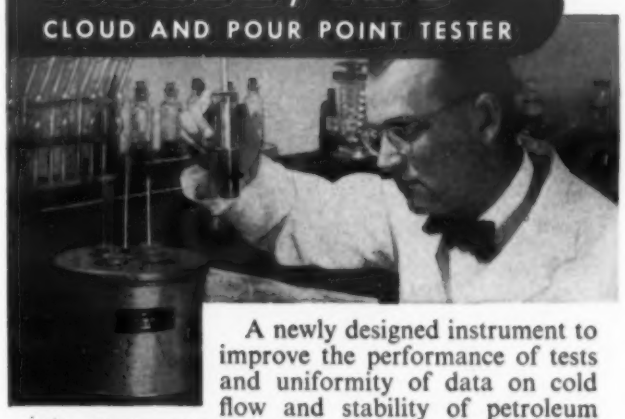
DRAWER 232, FESTUS, MO.

MANUFACTURERS OF PRECISION INSTRUMENTS SINCE 1934

▲ For more details circle NED-338 F5 on enclosed inquiry slip ▲

MORE EFFECTIVE TESTS FOR COLD FLOW AND STABILITY with the *improved*

FISHER/TAG
CLOUD AND POUR POINT TESTER



A newly designed instrument to improve the performance of tests and uniformity of data on cold flow and stability of petroleum oils. Designed to conform with specifications of ASTM D 97.

Has improved insulating cover with large opening for ice or CO_2. Labtone finish protects the insulated bath against corrosion.

Write for booklet FS-209-FF for more information on Fisher/Tag Cloud and Pour Point Tester and other petroleum testing equipment.

FISHER SCIENTIFIC
717 FORBES ST. PITTSBURGH 19, PA.

▲ For more details circle NED-339 F5 on enclosed inquiry slip ▲

LEAD SCREW TAPPER
produces 20 to 80-pitch threads

Depressing the finger-tip operated "trigger arm" on lead screw tapping unit feeds the tap into the work gently and automatically without any pressure on the tap itself. When the down stroke is concluded, the cork-faced friction clutch automatically disengages without overrun and the lead screw backs out when the trigger arm is reversed. Tapper can be manually operated or adapted to air operation. Uniform threads in any pitch from 20 to 80 can be produced. Depth stop disengages clutch at top and bottom of stroke. Tap capacity is 0 to ¼-in. in soft material, or 0 to 3/16-in. in steel. Lead screw travel is 1 3/16 in. Made by **Procunier Safety Chuck Co.**, Dept. N, 16-18 S. Clinton St., Chicago 3, Ill.

▲ For more details circle NED-341 F5 on enclosed inquiry slip ▲

CLAMP TYPE VOLT-AMMETER
single scale for all ranges

Self - shielded Cormag mechanism with spring-backed jewels, shock-mounted within the Bakelite case, is incorporated in the model 749 pocket-size clamp type volt-ammeter. Lightweight instrument has a scale window of shatterproof Plexiglas. Proper scale is selected by a thumb-action switch. Neoprene covered clamping jaws are tapered for measurements in limited areas. Conductors up to 1-in. round or 1¾ x ⅜-in. rectangular can be accommodated. Instrument has six current ranges of 300/150/60/30/15/6 amp and three voltage ranges of 600/300/150 v. Made by **Weston Electrical Instrument Corp.**, 617 Frelinghuysen Ave., Newark 5, N. J.

▲ For more details circle NED-342 F5 on enclosed inquiry slip ▲

Portable Reciprocating Tool

Nord International Corp.—The Original Di-Profiler is detailed in illustrated 4-page folder D-L5M. This lightweight portable fast-cutting reciprocating tool can be used to scrape, hone, mill, file, polish, saw, lap, grind and engrave with minimum of effort on part of toolmaker. More than a dozen different applications and all standard accessories are described.

▲ For more details circle NED-343 F5 on enclosed inquiry slip ▲

cut pumping costs with

JABSCO INDUSTRIAL PUMPS

Model 3600-01
Portable Plastic Pump and Motor Unit—316 S.S. Shaft—Carbon Bearings

- INSTANTLY SELF-PRIMING
- SIMPLE, COMPACT, ONLY ONE MOVING PART
- DURABLE NEOPRENE IMPELLER
- SELF-LUBRICATED
- TROUBLE-FREE OPERATION

JABSCO PUMPS

HERE'S another Jabsco industrial pump — designed and built for chemical, pharmaceutical and other industrial applications. Ideal for transfer of various liquids and acids — sump drainage, coolant pumping, general transfer, pulp in solution, filtering, brines, plating solutions — even fluids containing foreign matter or particles, silt, crystals, and other gritty materials. Bronze, stainless steel or plastic construction is available to *solve your specific* pumping problems. Pumps either light or heavy viscous liquids. Temperature ranges from 35° to 180° F. Write for a Jabsco factory recommendation for your own needs. Specify application, fluid pumped, temperature, pressure, etc.

PATENTED AND PATENTS PENDING

FREE — send for catalog sheets, detailed information... no obligation, of course!

JABSCO PUMP COMPANY
2031 Lincoln Street, Burbank, California

▲ For more details circle NED-345 F5 on enclosed inquiry slip ▲

Streamliner 400
new & faster

This brand new, synchronized Ozalid Streamliner 400 handles continuous roll stock and cut sheets up to 42"... prints as fast as 24' per minute.

Big prints, low cost

The accustomed dependability of the Streamliner has been augmented by the newest engineering advances... more efficient mercury vapor lamp, with balanced cooling, synchronized jet developer, and convenient controls ... make the new 400 the best value in the lower priced whiteprint field.

Call the nearest Ozalid distributor *(see phone book)* for a demonstration. Or write 138 Ozaway, Johnson City, N. Y. In Canada, Hughes Owens Co. Ltd., Montreal.

OZALID

A Division of General Aniline & Film Corporation ... *From Research to Reality*

Ozalid OZAMATIC *makes up to 1000 prints an hour, on materials as wide as 16"... can be operated by anybody.*

▲ For more details circle NED-340 F5 on enclosed inquiry slip ▲

NEW! A guide to the selection and application of Superior Tubing

This brand-new 8-page booklet was designed to help you select the proper SUPERIOR tubing for your use. It gives you at a quick glance the uses, advantages and normal production limits of all the standard ferrous and nonferrous alloys which SUPERIOR produces.

SUPERIOR makes a wide range of alloys available in tube form —over 55 analyses in carbon, alloy and stainless steels; nickel and nickel alloys; beryllium copper, titanium, glass sealing alloys. You can get all analyses in .010" to ⅝" O.D. and certain analyses in light walls up to 2½" O.D.

Use the convenient coupon below or check the return card for your free copy of this helpful, informative 8-page booklet.

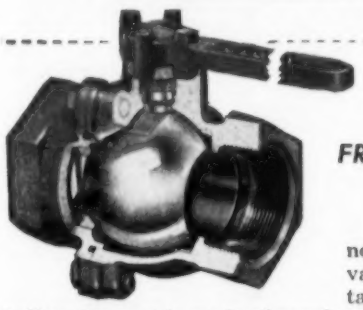
SUPERIOR TUBE COMPANY
2018 Germantown Avenue
Norristown, Pa.

Please send me at once a free copy of Bulletin 40 — A Guide to the Selection and Application of SUPERIOR Tubing.

Name.....Title.....
Company.....
Street.....
City.....Zone....State.....

▲ For more details circle NED-344 F5 on enclosed inquiry slip ▲

Now...**FULL ROUND FLOW WITH EASIER TURNING!**



NEW FRICTION REDUCING FEATURE

Rockwood Ball Valves now have another big advantage. The new retainer ring that holds the ball on the seat is made of powdered metal with a lubricating element. Seat is moly impregnated synthetic rubber. Results are: friction reduced to barest minimum; easier turning under higher pressures; permanent lubrication.

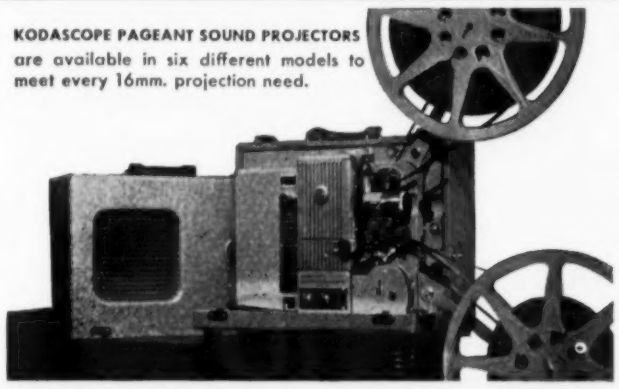
PLUS FOUR FAMOUS EXCLUSIVE FEATURES
• FULL ROUND FLOW • QUICK OPENING AND CLOSING
• LONGER WEAR RESISTANCE • LEAKPROOF SEAL

Plan now to put these benefits in your plant. Valves come in all pipe sizes — ⅜" to 2½" in bronze — 3" to 8" in steel. Tested and listed by Underwriters' Laboratories, Inc. Write today for free booklet. Rockwood Sprinkler Company, 506 Harlow St., Worcester 5, Mass.

ROCKWOOD BALL VALVES
For full round flow efficiency

▲ For more details circle NED-346 F5 on enclosed inquiry slip ▲

KODASCOPE PAGEANT SOUND PROJECTORS are available in six different models to meet every 16mm. projection need.



Put movies to work
with this trouble-free projector

Movies make almost every type of training or technical information easy to understand . . . easy to use . . . and easy to remember.

You know your movie shows will be successful when you use a Kodascope Pageant 16mm. Sound Projector. Faulty lubrication, the most common cause of projector breakdowns, is eliminated by the sound-Pageant's permanent pre-lubrication. Only the Pageant has this important feature.

Simple, guided threading makes the Pageant unusually easy to operate. Completely portable, projector and well-baffled 8-inch speaker are built into a single, handy, lightweight case.

WRITE FOR FREE PAGEANT CATALOG.

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak

▲ For more details circle NED-347 F5 on enclosed inquiry slip ▲

A Complete Line of

Corrosion-Resisting Fittings!

INCO-CAST in Monel®, Nickel and Inconel®

They Offer You

All these features
- Resist most corrosives
- Withstand high and sub-zero temperatures
- Strong . . . tough . . . sound
- Protect product purity
- Controlled alloy composition
- Pressure-tested
- Economical in cost
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—in all these types

Couplings
45° Elbows
90° Elbows
Tees
Crosses
Unions
Caps
Pipe Plugs
90° Street Elbows
Lock Nuts
Bushings
"Y" Laterals
Half Couplings
Close Nipples
Flanges
45° Flanged Elbows
90° Flanged Elbows
Flanged Tees
Short Nipples
Reducing Couplings
Reducing Tees
Reducing Elbows
Welding Nipples
Return Bends
. . . and others

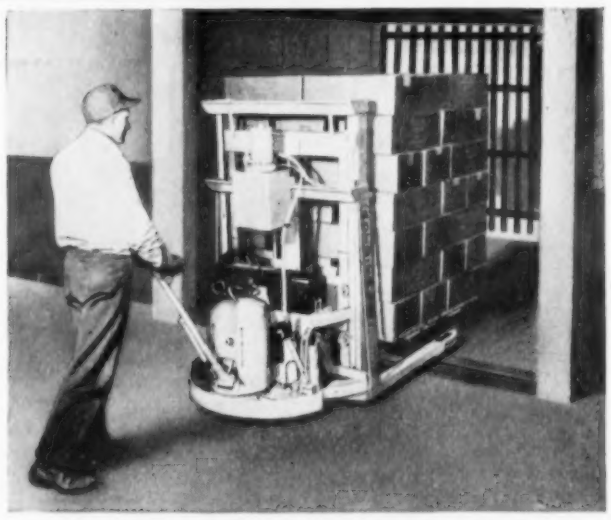
PLUS
Special shapes and sizes made to order

WRITE NOW
for handy price list catalog. It contains full information. Sent promptly on request, without cost or obligation to you.

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street, New York 5, N. Y.

INCO

For more details circle NED-348 F5 on enclosed inquiry slip



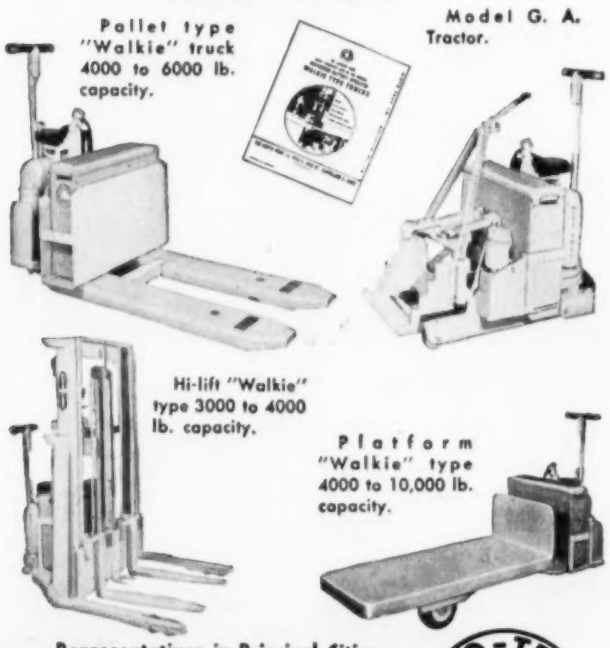
ON THE ELEVATOR . . .
with FREIGHT CAPACITY to Spare!

Excessive re-handling of loads because of limited elevator capacities is often completely eliminated with Moto-Trucs. The light, yet powerful compactness of a Moto-Truc lets you move load and truck into an elevator with weight capacity to spare.

The complete line of Moto-Trucs are designed and built for economical, space saving operation. Inch for inch . . . pound for pound . . . Moto-Trucs are the smallest, yet the most powerful walkie trucks in the world.

a MOTO-TRUC for every purpose . . .

Write for Bulletin No. 54 . . . it covers the complete Moto-Truc line.



Representatives in Principal Cities

The MOTO-TRUC Co.

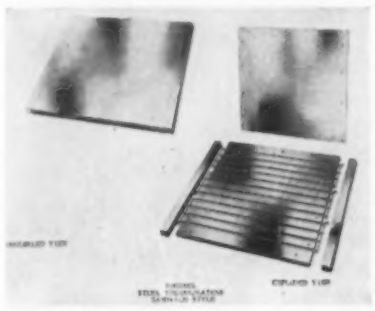
MOTO-TRUC Designers for the Industry PATENTED

1961 E. 59th St. • Cleveland 3, Ohio

Pallet . . . Platform . . . Hi-Lift Trucks
The Originators of the Walkie and Small Rider Type Truck.

For more details circle NED-349 F5 on enclosed inquiry slip

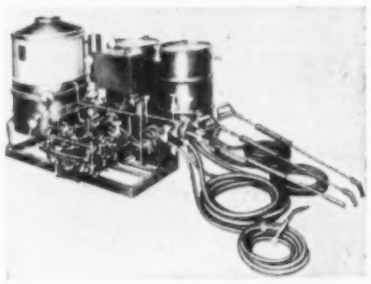
HEATED PLATENS
sizes up to 8 x 12 ft



Replaceable electrical heating units are incorporated in Thermaplaten line of steel sandwich style heated platens for use in various types of machines. They are machined to within 0.005-in. parallel, have a heat range to a maximum of 600° F and possess compressive strength up to 7000 psi. Sizes up to 8 x 12 ft are available. Made by **Thermel, Inc.**, 3444 W. Lake St., Chicago 24, Ill.

For more details circle NED-350 F5 on enclosed inquiry slip

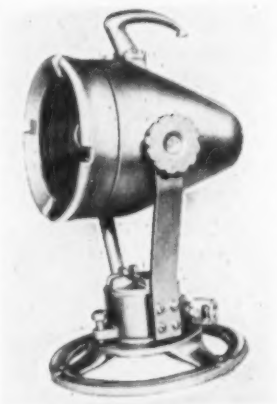
STEAM CLEANING MACHINE
for large industrial cleaning jobs



Capable of 600-gph steam cleaning and 500-gph high pressure rinsing operations, this heavy duty cleaning machine is available for industrial, automotive and commercial use. It can be used with one, two or three vapor cleaning nozzles, and additional nozzle is used for hot or cold water rinsing at 300 psi. Gas and oil-fired models are offered. Made by **Clayton Mfg. Co.**, Dept. N, Box 550, El Monte, Calif.

For more details circle NED-351 F5 on enclosed inquiry slip

EXPLOSIONPROOF FLOODLIGHT
weather resistant, light, portable



By meeting specifications for lighting equipment usable in Class I, Groups C and D hazardous locations, this explosionproof floodlight can be used for emergency lighting at refineries, distillation plants, where industrial dust is present and for aircraft maintenance and refueling. Aluminum construction makes it weather resistant, light and portable. Plain heat resistant front glass is clamped into position by an internal ring and easily removed for relamping. Made by **Pyle-National Co.**, 1342 N. Kostner Ave., Chicago 51, Ill.

For more details circle NED-352 F5 on enclosed inquiry slip

BIN STUCK LATELY?
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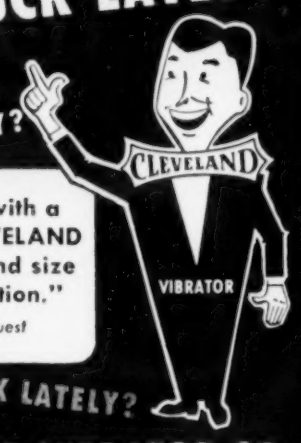


"Loosen it up with a quick action CLEVELAND vibrator. Type and size for any application."
Literature on request

THE CLEVELAND VIBRATOR CO.
2744 Clinton Avenue • Cleveland 13, Ohio

For more details circle NED-353 F5 on enclosed inquiry slip

NEW FREE CATALOG

FOR
- Designers
- Purchasing Agents
- Engineers
- Superintendents
- Managers

FREDDY FEDERAL will rush your copy today!

Costs, materials, and procedures graphically illustrated. New catalog tells where and how you can save money using Short Run Stampings. Also design tips to reduce stamping costs.

Write for your copy of catalog 201 today.

Federal TOOL AND MANUFACTURING CO.
3618 ALABAMA AVE. (ST. LOUIS PARK)
MINNEAPOLIS, MINNESOTA
"QUALITY STAMPINGS IN SMALL QUANTITIES"

For more details circle NED-354 F5 on enclosed inquiry slip

production flows smoothly . . .
at top speed, at all times, yet free of rejects

Kester makes 62 different fluxes to meet any requirements. Why not write our Technical Department for full information?

KESTER SOLDERING FLUX

KESTER SOLDER COMPANY
4249 Wrightwood Ave., Chicago 39
Newark 5, N. J. • Brantford, Canada

KESTER SOLDER

For more details circle NED-355 F5 on enclosed inquiry slip

Quality

STARTS at 100 lbs.
W. S. P.

Ohio Brass believes in building the same fine quality into its 100-pound (WSP) valves as it does into valves of higher pressures. So on lines where pressures do not exceed 100 pounds for working steam, or 150 pounds for water, oil, or gas, why not use one of the Ohio Brass 100-pound valves? Save yourself the additional price that you would pay for a higher pressure valve.

O-B makes 100-pound (WSP) globes and gates with both threaded and solder-type pipe ends.

Ohio Brass makes a complete line of bronze valves for industrial use. Write today for additional information.

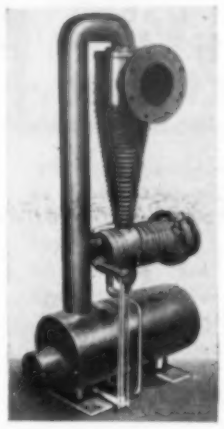
4457-V

O-B VALVES

Ohio Brass MANSFIELD OHIO, U. S. A.

For more details circle NED-356 F5 on enclosed inquiry slip

how to measure your high-vacuum vapor pump's efficiency



CVC's Convoil-20 vapor-pump fluid meets the needs of pumps like this type KB-150, oil-ejector pump where large gas-handling capacity is required with an ultimate pressure of 5 x 10^{-4}mm Hg.

. . . in pints, quarts, and gallons

The ultimate pressure your high-vacuum vapor pump will produce depends in large measure on the vapor pressure of the pump fluid.

The chemical and thermal stability of the fluid largely determines the maximum throughput and limiting forepressure your pump achieves.

Still other characteristics affect ultimate pressure and the speed with which you reach it.

For this reason, *CVC* has developed six vapor-pump fluids—Octoil, Octoil-S, Convoil-10, Convoil-20, Convaclor-8, and Convaclor-12—each especially compounded to meet the needs of a particular type of high-vacuum pump.

For detailed information to help you select the fluid that's best for your pump, write to ***Consolidated Vacuum Corporation, Rochester 3, N.Y.*** (a subsidiary of ***Consolidated Engineering Corporation, Pasadena, California***).

CVC

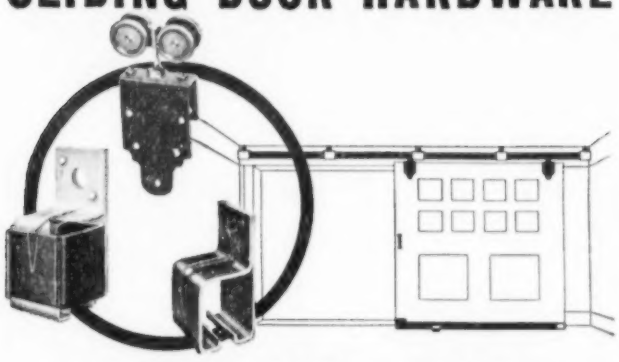
Consolidated Vacuum Corporation Rochester 3, N.Y.
Headquarters for High Vacuum

CVC sales now handled through Consolidated Engineering Corporation with offices located in: Albuquerque • Atlanta • Boston • Buffalo • Chicago • Dallas • Detroit New York • Palo Alto • Pasadena • Philadelphia • Seattle • Washington, D. C.

▲ For more details circle **NED-357 F5** on enclosed inquiry slip ▲

COBURN

SLIDING DOOR HARDWARE



For All Industrial Door Installations

- ***Door hangers, brackets and track for doors weighing up to 1500 lbs.; up to 3 inches thick.***
- ***Straight and curved track in standard lengths of 6, 8 and 10 feet.***

For information write to Sales & Engineering, 56 Sterling Street, Clinton, Mass.; or see your classified telephone directory.

2685

COBURN PRODUCTS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION CF&I

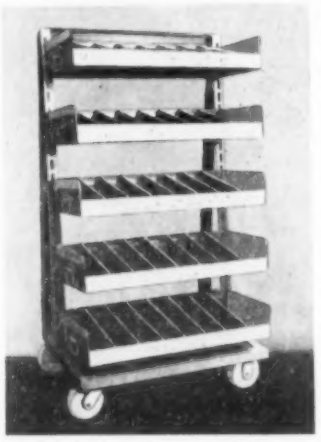
▲ For more details circle **NED-358 F5** on enclosed inquiry slip ▲

MIXING PROPELLER claw type is stainless steel

Efficient stainless steel claw mixing propellers are now available for use on existing propeller - type mixers. Three-blade propellers are balanced, have smooth finish and are free of pits. Stock diameters are 3, 4, 5, 6, 7, 8, 10 and 12 in. Additional and larger sizes can be made to order. Made by **Craddock Equipment Co.**, Dept. CP, 1507 A St., Wilmington, Del.

▲ For more details circle **NED-360 F5** on enclosed inquiry slip ▲

DIVIDED RACK TRAYS speed handling of small parts



Five semiclosed trays measuring 6 x 15 x 32¾ in. can be fitted with up to 30 dividers each to facilitate handling of small parts and assemblies with this single Ver-T-Rack mobile unit. Trays are adjustable vertically to 23 positions, and they can be removed complete with their contents for processing, transfer or storage. Dividers are adjustable horizontally to accommodate parts of any size. This Ver-T-Rack is equipped with easy-rolling 6-in. ball bearing wheels for mobility. Parts or assemblies are readily accessible at a machine or bench for further processing, and entire load is readily moved to next operation. Made by **Vince Basnik Co.**, Dept. N, 2020 Center St., Cleveland 13, O.

▲ For more details circle **NED-361 F5** on enclosed inquiry slip ▲

Container Filling Equipment

G. Diehl Mateer Co.—"How Modern Is Your Filling Equipment?" is a 16-page brochure which describes Mateer electric fillers which handle up to 240 containers per minute. Mechanical accuracy is 99.7 per cent. One filler can handle liquids, powders and paste, with changeover taking about 5 minutes. Design features, flexibility and application data are detailed.

▲ For more details circle **NED-362 F5** on enclosed inquiry slip ▲

IDEAL

WIEDEKE IDEAL TUBE EXPANDERS

for rolling sleeves in diesel cylinder heads

Typical cross section of Cylinder Head showing Sleeve. Expander with short Mandrel used at upper end. Expander with long Mandrel used at lower end.

Two style Expanders are shown, other styles quoted promptly. Please supply us with full details of your requirements.

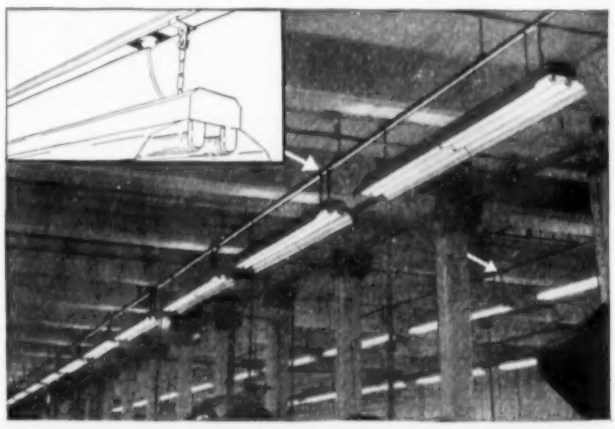
See your Dealer or write us for Bulletin.

THE GUSTAV **WIEDEKE** COMPANY
DAYTON 1, OHIO

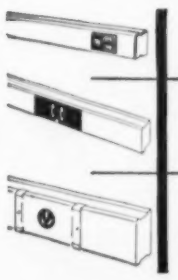
▲ For more details circle **NED-363 F5** on enclosed inquiry slip ▲

Modernize your electrical wiring with Wiremold

Increase EFFICIENCY and SAFETY in your plant with Wiremold Surface Metal Raceways and Multi-Outlet Systems which permit changing or extending existing wiring temporarily or permanently, and handle difficult special wiring installations quickly, easily and economically. Ten sizes of Wiremold raceways and a minimum number of well-designed fittings meet the requirements of every kind of wiring job . . . simplify all wiring jobs from panel box



In this factory lighting modernization, Plugmold 2100 simplified the wiring problem and now allows lighting units to be disconnected quickly for easy maintenance.
(Send for Data Sheet D-4 for complete details.)



Plugmold 2000 multi-outlet system with Snapicoil pre-wired receptacles provides continuous runs of electrical outlets *anywhere*.

Plugmold 2100—a larger raceway for applications where more than one or two circuits are required.

Wiremold 3000—a heavy duty system with a full series of cover fittings to adapt the raceway as an industrial plug-in-anywhere system.

You are invited to place your wiring problems before our Engineering Department. There is a Wiremold answer to every wiring problem. We will be glad to help you find it.

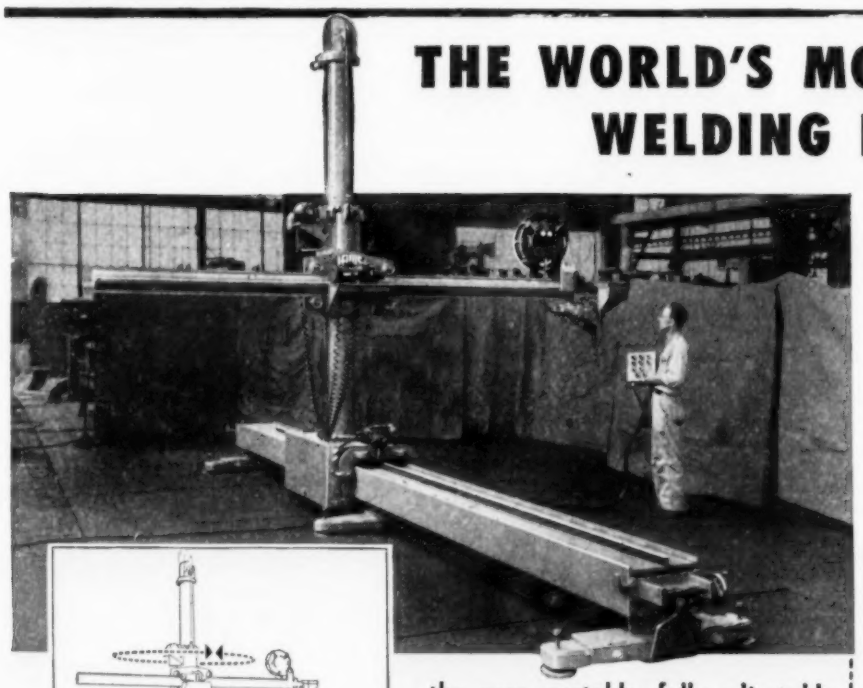
For complete information write Dept. 56

Stocked by electrical wholesalers, installed by electrical contractors . . . everywhere.

The WIREMOLD Company
Hartford 10, Connecticut

▲ For more details circle **NED-364 F5** on enclosed inquiry slip ▲

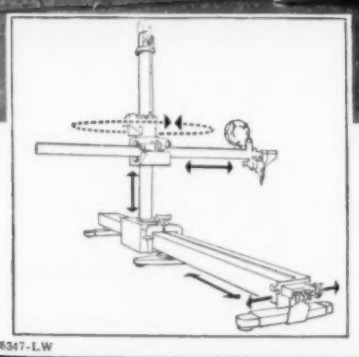
THE WORLD'S MOST VERSATILE WELDING FIXTURE



Exclusive features of this LEWIS automatic welding fixture include full portability . . . simultaneous 3-directional travel . . . 360° boom rotation . . . adjustable base . . . use of any standard head for welding, flame cutting or hardening.

Designed to handle a wide variety of jobs, this fixture reduces set-up time for large weldments 60% or more. It can be moved easily by crane to any plant location. Full boom rotation permits multiple set-ups with only one machine.

The LEWIS "Universal" Welder has 18 feet of longitudinal travel . . . can be supplied with booms and columns of different lengths. Transverse travel of boom and clearance under it range from 8 to 12 feet, depending on size of machine.



6347-LW

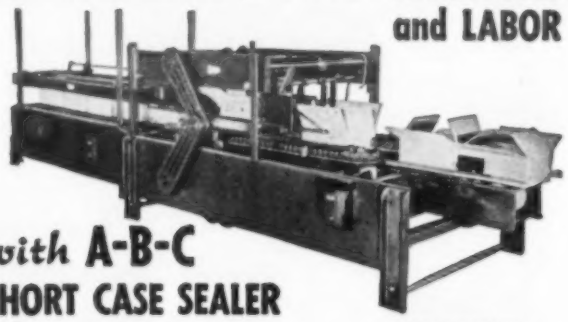
the new, portable, fully adjustable
LEWIS "UNIVERSAL" WELDER

LEWIS

THE LEWIS WELDING & ENGINEERING CORP.
14 Interstate Street • Bedford, Ohio

▲ For more details circle **NED-359 F5** on enclosed inquiry slip ▲

Save FLOOR SPACE and LABOR



with A-B-C SHORT CASE SEALER

Save two-thirds of your valuable floor space with the A-B-C Short Case Sealer—with increased packaging efficiency, more speed, less expense . . . Automatically glues, folds and seals either or both top and bottom flaps of shipping cases in one operation. Made in eight models to fit any production requirement. Hot air heaters dry the glue in one-half the time. Speeds up to 30 cases per minute.

TOP QUALITY CASE HANDLING EQUIPMENT

Whatever your packaging job, A-B-C has a production proved machine for you—case sealers, unloaders and unscramblers, side sealers, and hand gluers.

WRITE NOW FOR DETAILS AND FLOOR PLANS

A-B-C PACKAGING MACHINE CORP. QUINCY, ILLINOIS

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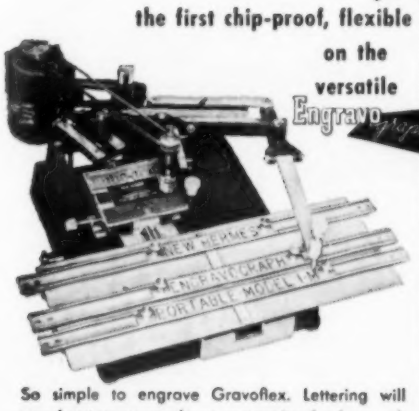
THE NEW WAY TO MARK EQUIPMENT... with GRAVO flex

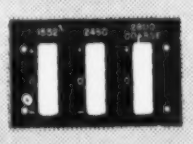
the first chip-proof, flexible engraving stock on the versatile Engravograph



shear it

bend it

form it



punch it

So simple to engrave Gravoflex. Lettering will stand out permanently on contrasting background. No paint needed.

10,000 Engravographs in use for engraving on metals and plastics. Only the Engravograph has these patented features:

• Adjustable for 15 ratios. • Self-centering holding vise. • Automatic depth regulator. • Adjustable copy holders.

Send for booklets
Engravograph Booklet IM-26 • Gravoflex Booklet G-26

NEW HERMES ENGRAVING MACHINE CORP.
13-19 UNIVERSITY PLACE, NEW YORK 3, N. Y.

STOP LEAKS

Leaks in concrete walls can be stopped quickly with FLEXTITE. Actually seals against water pressure. Efficient as a plaster coat for sealing off water and dampness. Converts wet basements into dry useful space. Used in elevator pits, tunnels, dams, tanks, retaining walls. In reconstruction work, broken pillars and beams can be quickly reshaped with FLEXTITE.

MAIL COUPON for FREE TRIAL OFFER

FLEXTITE

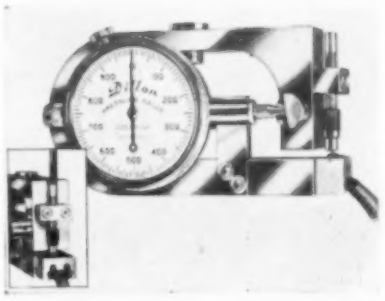
FLEXROCK COMPANY • Offices in Principal Cities
3603-F FILBERT STREET, PHILADELPHIA 1, PA.

Please send me complete FLEXTITE information and details of TRIAL ORDER PLAN — no obligation.

Name .....
Company .....
Address .....

▲ For more details circle NED-367 F5 on enclosed inquiry slip ▲

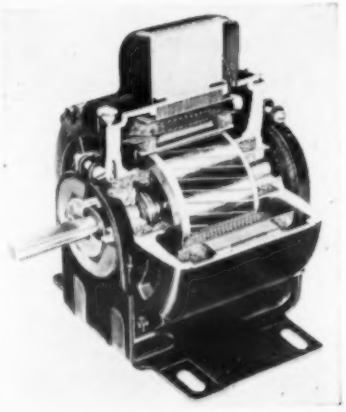
PRESSURE GAGE has electrical control feature



This pressure control instrument consisting basically of Dillon mechanical pressure gage adapted to electrical control by means of subminiature Micro Switch operates at preset adjustable pressure on the gage. Device will operate wide variety of power equipment such as motors, valves, hoppers and relays. Switch is rated 5 amp on 125 or 250 v ac or 2 amp on 30 v dc. Contact arrangement is single-pole, double-throw. Three heavy duty leads are soldered to terminals. Control is available with any of 10 capacities from 0-10 up to 0-10,000 psi. Gages are accurate within 1 per cent and will withstand up to 25 per cent overloads. Made by **W. C. Dillon & Co.**, Dept. NED, 14620 Keswick St., Van Nuys, Calif.

▲ For more details circle NED-368 F5 on enclosed inquiry slip ▲

BLOWER DRIVE MOTOR low starting and running current



Type CY MicroMotor used for direct-drive of heating, ventilating and refrigerating apparatus blowers has no starting switches or relays, low starting and running current, high power factor and gradual torque build-up. Motor is also suitable for multispeed operation and mounting in any position. Uni-Cast motor stator and die cast frame which prevents shifting and vibration of laminations are other features. Completed core, end bells, bearings and shafting are machined for quiet operation and long life. This split-capacitor motor is available in sizes from 1/10 to ⅓-hp. Made by **Redmond Co.**, Dept. ND, Owosso, Mich.

▲ For more details circle NED-369 F5 on enclosed inquiry slip ▲

Optical Alignment Equipment

Eastman Kodak Co.—"The Axicon: A New Optical Element" is title of 22-page illustrated manual No. U-1 which describes an optical element which is usable for alignment problems. Element improves accuracy of aligning telescopes, and when used with a light source and a suitable beam splitter in a telescope, it becomes an autocollimator.

▲ For more details circle NED-370 F5 on enclosed inquiry slip ▲

STUDY.... these outstanding features of the New CHESTERMAN Vernier Height Gage

The Most significant advance in a quarter Century of HEIGHT GAGE DESIGN

Sizes Available 12" - 18" - 24" 40" - 48"

Ask for and Compare our Moderate Prices!

If not available at your favorite Supply House — Write to us for 6-Page ILLUSTRATED FOLDER—Code GIPDU

GEORGE SCHERR CO., Inc.
COMPLETE LINE OF PRECISION INSTRUMENTS
200-ND LAFAYETTE STREET • NEW YORK 12, N.Y.

▲ For more details circle NED-371 F5 on enclosed inquiry slip ▲

NO PLANT GROWTH WHEN YOU USE DOLGE SS WEED-KILLER

For areas where you want ALL unsightly, fire-inviting weeds and grasses eliminated, such as railroad sidings, along fences and abutments, parking lots, drives and walks. An economical solution of SS Weed-Killer kills plants and seeds on contact, then works down through the soil, killing roots and sterilizing surrounding earth—affording freedom from weeds for as much as an entire year!

And . . . for keeping lawn areas, seeded traffic islands and other improved areas free from noxious weeds, use E.W.T. *SELECTIVE* WEED-KILLER. Non-injurious to most grasses.

Scientific chemical weed control literature on request.

FOR FREE SANITARY SURVEY OF YOUR PREMISES SEE YOUR DOLGE SERVICE MAN

dependable DOLGE
WESTPORT, CONNECTICUT

▲ For more details circle NED-372 F5 on enclosed inquiry slip ▲

JUST OFF THE ASSEMBLY LINE...

New Flow Valve

WESTINGHOUSE TYPE D PILOTAIR VALVE

Gives you reliable control of single-acting and double-acting cylinders

Gives you efficient interlocking and sequencing

Gives you a choice of hand, foot, pneumatic, mechanical or electrical operation

YOU'LL LIKE THESE FEATURES

3,125 USES. Every valve is made up from a number of sections that bolt together easily to give you any type of operation.

PRESSURE SEAL *STAYS* IN THE GROOVE. Completely new Westinghouse seal can't roll out of position . . . will not nick, scar or chip.

LONG LIFE, LOW MAINTENANCE. No moving metal parts rub against metal. *Valve spool floats on rubber.* Stainless steel spool and aluminum alloy body resist corrosion.

WRITE FOR MORE FACTS

or get in touch with your local Westinghouse Air Brake Co. Distributor. He's in the classified phone book under "Cylinders: Air."

Westinghouse Air Brake COMPANY
Industrial Products Division
WILMERDING PENNSYLVANIA

Pneumatic cylinders, valves, engineered pneumatic systems and air control devices of all kinds.

Factory Branch: Emeryville, Calif. Distributors throughout the United States. Distributed in Canada by: Canadian Westinghouse Co., Ltd., Hamilton, Ontario.

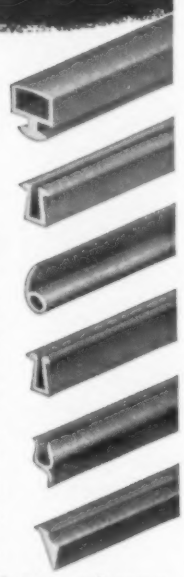
▲ For more details circle NED-373 F5 on enclosed inquiry slip ▲

EXTRUSIONS

TO YOUR

SPECIFICATIONS

By CONNEAUT



If you need production of extruded plastic shapes, or special plastic compounding to meet unusual product specifications, write, wire or phone Conneaut. We have the experience and facilities to meet your requirements for either or both efficiently, rapidly and economically. At no obligation we'll quote from your prints and specifications, or analyze your problem and make recommendations.

Write for FREE Illustrated Brochure

giving complete details on Conneaut's custom service in plastic compounding and extruding. 440-D

CONNEAUT
RUBBER & PLASTIC COMPANY
CONNEAUT, OHIO

▲ For more details circle NED-374 F5 on enclosed inquiry slip ▲

the BEST TOOL for every cleaning job

an EXCELLENT FIRE PRECAUTION too

HYPRESSURE
Jenny
STEAM CLEANER

New Series "1800" Jenny, ideal for industry's heavy-duty cleaning jobs.

As a general maintenance tool JENNY will save you up to 90% in man-hours and plant cleaning costs by removing oils, grease, muck and grime from machinery, conveyors, floors, walls, skylights, semi-finished products, tools and equipment, *10 times faster—and better* than bucket, brush, and scraper, volatile solvents, or other outmoded cleaning methods. And you'll realize additional savings through the stepped-up production which results when mechanics work with clean tools and equipment.

Add to this the fact that by JENNY steam cleaning you are eliminating the oils, grease, and other inflammables that spark fires and spread them, and you can see why a *JENNY in your plant is one of the best methods of fire precaution you can take.*

Send for Catalog today for full facts.

HYPRESSURE JENNY DIVISION
HOMESTEAD VALVE MANUFACTURING CO.
Serving Since 1892
P.O. BOX 84 CORAOPOLIS, PA.

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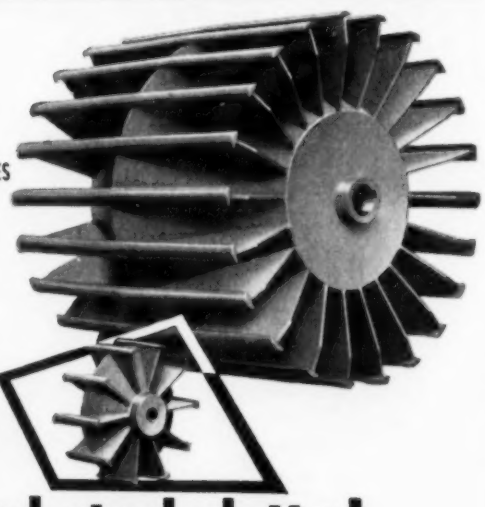


STANDARD SIZES
12" to 42" DIAMETER
8" to 42" WIDTH

save belts with welded steel slatted pulleys

Jeffrey's self-cleaning cone design prevents build-up of gritty or sticky materials that damage and misalign conveyor belts. Wide crossbars give good traction, rounded edges prevent gouging. *Money-saving Jeffrey Slatted Pulleys outlast, outperform solid-face type!* Write Merchandise Sales Division.

THE JEFFREY MANUFACTURING CO.
Columbus 16, Ohio

IF IT'S MINED, PROCESSED OR MOVED ...IT'S A JOB FOR JEFFREY!

sales offices and distributors in principal cities

▲ For more details circle NED-376 F5 on enclosed inquiry slip ▲

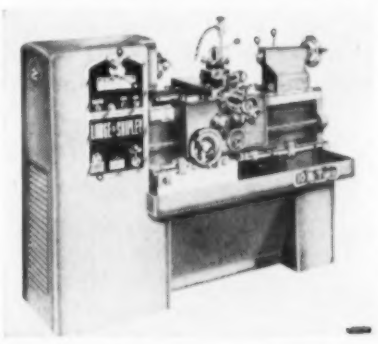
REMOTE CONTROL SWITCH
cuts power when stoppage occurs on line conveying metal objects

Applicable on any line conveying metal or metal spotted objects, this waterproof, electronic, line-flow switch consisting of control and remote coil automatically cuts off power when stoppages occur at any point in line. Jams and backups are thus prevented. Line flow is resumed automatically when trouble spot clears since electronic impulses control motor starters at all vital points. Because of 1-second delay in circuit, only objects stopping for this time or longer within field of remote coil will actuate the circuit.

Switch can be mounted a considerable distance from line and is available with metal or nonconductive reinforced glass fiber case. It operates on 110 v ac and will control 110, 220 or 440-v devices. In the circuit, component parts are standard electronic items and are easily obtained. Made by **Dudley Machinery Corp.**, P. O. Box 397-D Mountain View, Calif.

▲ For more details circle NED-377 F5 on enclosed inquiry slip ▲

10-IN. PRODUCTION LATHE
5-hp unit features nine spindle speeds from 202 up to 3000 rpm



Designed specifically for production operations, this Hi-Turn 10-in. heavy-duty geared head lathe provides nine spindle speeds ranging from 202 to 3000 rpm. Unit is designed without a leadscrew. A feed rod is provided for turning, boring and facing operations. Other features of this 5-hp unit include enclosed quick-change gear box, built-in four-way tool block with provision for rear tool block and multiple tool operation, dual direct-reading micrometer cross feed dials reading to 0.001-in. on diameter and automatic template length stops.

Drive motor, with dynamic brake is in the leg, and control buttons are all on headstock. Gear box provides nine feeds ranging from 0.0015 to 0.024-in. per revolution. Micrometer dial indicates carriage travel in 0.005-in. graduations. Lathe has three-point mounting, with base, pan legs and coolant sump being integrally cast. Base is designed for easy chip removal by hand or conveyor. Made by **Lodge & Shipley Co.**, 3051 Colerain Ave., Cincinnati 25, O.

▲ For more details circle NED-378 F5 on enclosed inquiry slip ▲

NOW... blowout-proof to 10,000 psi!

CEC's new 4-313 *high-pressure* pickup extends the range of the widely used resistance-type 4-300 series to include *absolute* measurements as high as 5000 psi. Important added feature . . . every absolute pickup has a rear seal capable of containing pressures as high as 10,000 psi.

flush diaphragm — with ¼-18 NPT accessory adapter

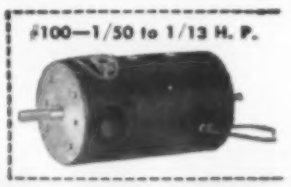
Pressure ranges...500, 1000, 2000, 3000, 5000 psi (absolute and gage)
Sensitivity....20 mv f.s.
Excitation...5 v d-c or a-c rms, 0-20 kc
Input/output impedance...350 ohms
Linearity...1% f.s. max. deviation
Hysteresis...less than 1% of f.s.
Acceleration response...less than 0.01% of f.s. per g
Construction...416 stainless steel
Electrical Connection...four numbered pin terminals
Size...⅝-inch diameter, 1-inch length
Weight...30 grams without flange or adapter

A complete calibration certificate sent with every unit.

Send for Bulletin CEC 1541-X6.

Consolidated Engineering CORPORATION
300 North Sierra Madre Villa, Pasadena 15, California

▲ For more details circle NED-379 F5 on enclosed inquiry slip ▲

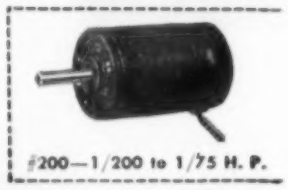


#100—1/50 to 1/13 H. P.

a lot of

POWER

in a small package



#200—1/200 to 1/75 H. P.

HOWARD Universal & DC fractional H. P. Motors

Among the most versatile motor types in the wide Howard line, these two small motors are used for everything from aircraft pumps to radar equipment. More than 1000 specifications for as many applications are on file for these two motors. Chances are we have the right model to fit your needs. Write today and tell us your requirements. Your inquiry will be handled promptly.

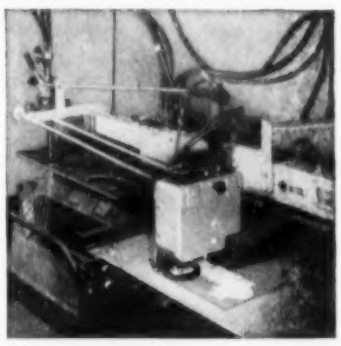
DEPT. NE-6 HOWARD INDUSTRIES, INC. • RACINE, WIS.
DIVISIONS: EMC ELECTRIC MOTOR CORP. CYCLOHM MOTOR CORP. RACINE ELECTRIC PRODUCTS

▲ For more details circle NED-380 F5 on enclosed inquiry slip ▲

SIMPLIFY Your Shape-Cutting Jobs with the...
OXWELD Automatic Tracer

Trade-Mark

- Positive templet contact... electronic steering control ... maximum tracing accuracy
- Templets are easy to make, low-cost
- No kerf allowance required in templet
- Dynamic braking prevents overruns
- Local or remote controls ... simple to operate

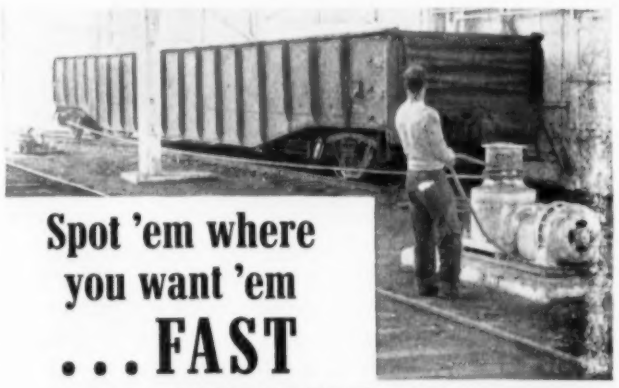


With an OXWELD Automatic Tracer to guide your oxygen-cutting machine, you need never forego the advantages of templet tracing because of time or cost. Just cut actual size templets out of thin plastic sheet with scissors—that's all! Tracer follows practically any templet shape within extremely close tolerances. Drive action is smooth and steady with both single- and multiple-blowpipe setups. Write today for free booklet F-8086.

LINDE AIR PRODUCTS COMPANY
A Division of Union Carbide and Carbon Corporation
30 East 42nd Street UCC New York 17, N. Y.
Offices in Other Principal Cities
In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

The term "Oxweld" is a registered trade-mark of Union Carbide and Carbon Corporation.

▲ For more details circle NED-381 F5 on enclosed inquiry slip ▲



Spot 'em where you want 'em ...FAST with a LINK-BELT car spotter

As quickly as one man can wind two or three turns of rope around the motor-driven capstan, your cars can be spotted easily . . . exactly. Reduces switching and demurrage time . . . releases manpower for other jobs. Get all the facts. Now!

WRITE TODAY for this comprehensive free book

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Please send me 24-page illustrated Book 2092.

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Firm .....
Address .....
City ..... Zone .... State .....

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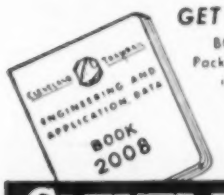
UPS PRODUCTION 300%

TRAMRAIL SYSTEM PAYS FOR ITSELF IN SIX MONTHS

After a reinforcing rod plant built a new building and equipped it with Cleveland Tramrail cranes, costs took a nose dive.

Whereas 8 men formerly worked 8 hours in the old building to unload a car of rods, two men now do the job in 30 minutes with Tramrail cranes. The Tramrail cranes have enabled doubling the production, and at the same time reducing man-hours by one-half.



GET THIS BOOK! BOOK No. 2008 Packed with valuable information...

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6647 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

▲ For more details circle NED-383 F5 on enclosed inquiry slip ▲

FABRICATED WIRE CLOTH PARTS

to your order

Our special business is specials . . . special fabricated wire cloth parts made to your specifications. We save you time, we save you overhead, we save you production worries. And, you get a better part at a lower cost.

We weave our own cloth . . . your guarantee of quality components. We are fully equipped to do all necessary cutting, shaping, fitting, welding, soldering, punching, binding, etc.

For more information on this "One-Stop" Wire Cloth Parts Service, send for our latest Parts Catalog.

NEWARK for ACCURACY

Newark Wire Cloth COMPANY

351 VERONA AVENUE • NEWARK 4, NEW JERSEY

▲ For more details circle NED-384 F5 on enclosed inquiry slip ▲

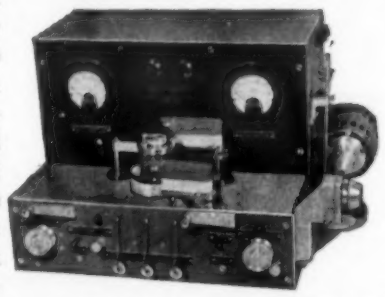
WHITEPRINT MACHINE makes up to 42-in. wide copies

Direct copies of translucent engineering drawings, records, reports or business forms up to 42 in. wide can be made by Streamliner 400 whiteprint machine. In printer section, electronic speed drive facilitates instant changes of synchronized printing and developing speeds from 9 to 24 fpm. High pressure, mercury vapor lamp and balanced cooling system assures border-to-border exposure. Dry-developing section has jet-type atomizer which forces ammonia into pressurized vapor tank, assuring uniform and complete development. Automatic controls regulate vapor circulation with machine speed, and manual auxiliary control affords best results with all types of sensitized materials. Components are easily removed for servicing. Made by **General Aniline & Film Corp.**, Ozalid Div., 16 Ansco Rd., Johnson City, N. Y.

▲ For more details circle NED-385 F5 on enclosed inquiry slip ▲

DYNAMIC BALANCING MACHINE corrects high speed rotor unbalance to 0.00001 in.-oz

Dynamic unbalance in high speed rotors can be measured and corrected to better than 0.00001 in.-oz with this dynamic balancing machine. Rotor is mounted in jig in front of machine and brought up to desired speed, which is controlled automatically within 2 rpm. When speed is reached, electric spark marking is used to locate point of unbalance on rotor periphery. Plane of unbalance and amount of corrective drilling required are visually indicated.



High precision drill controlled by single lever is also mounted on machine to drill the holes that will correct the rotor unbalance. Machine is about size and weight of an electric typewriter and can be carried to the job when necessary. Rotors over 5-in. diameter, too large for balancer, can be separately mounted and leads run to connectors on the machine. Balancer is made to meet wide range of industrial balancing needs by **Decker Aviation Corp.**, 1361 Frankford Ave., Philadelphia 25, Pa.

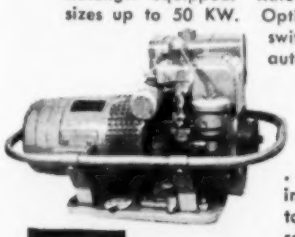
▲ For more details circle NED-386 F5 on enclosed inquiry slip ▲

POWER Breakdowns need not be costly!

KEEP PRODUCTION MOVING WITH AN...

Emergency Katolight POWER PLANT!

Vital electrically operated equipment can continue to function in spite of normal power failure, when your plant is Katolight equipped. Katolight Units are available in standard sizes up to 50 KW. Optional safety and signal controls and switches that transfer load to emergency automatically. Also Katolight A.C. Generators to 400 K.W. Motor-Generator Sets, Rotary Converters and Motors.



Katolight Portable Plants

. . . speed work crews, cut costs. Plug in time-saving electrical equipment and tools. Ideal for civil defense, fire and rescue squads. In use the world over.

Katolight CORPORATION

FREE! Write For Folder

Box 891-76 Mankato, Minnesota

▲ For more details circle NED-387 F5 on enclosed inquiry slip ▲

SLY "ECONOMY" DUST FILTERS Small, Compact, Inexpensive

The Sly ECONOMY Dust Filter is especially suited for collecting the dust from individual machines or from a small group of dust points in close proximity to each other. It is compact yet it has an abundance of filter cloth which helps to maintain a uniform suction.

This filter offers: (1) *High Efficiency* with complete dust collection; (2) *Low Power*, a 3 HP motor will handle 1400 cu. ft. per minute; (3) *Long Life* because a very liberal amount of filter cloth is used; (4) *Compactness* because the filter cloth occupies a minimum of space; (5) *Effective Bag Cleaning* by means of a simple shaking device.

Made in four standard sizes, to filter dust out of 300 to 1400 cu. ft. air per minute. Write **The W. W. Sly Manufacturing Co.**, 4748 Train Avenue, Cleveland 2, Ohio. There are experienced Sly engineers in New York, Chicago, Philadelphia, Rochester, Detroit, Buffalo, Cincinnati, St. Louis, Minneapolis, Birmingham, Denver, Los Angeles, Toronto. Advt.

▲ For more details circle NED-388 F5 on enclosed inquiry slip ▲

REPAIR CONCRETE FLOORS AND USE THEM IN 45 MINUTES WITH Kwik-Roc!

Now you can repair cracks and holes in concrete floors while the plant is out to lunch. Use KWIK-ROC. It makes a floor patch that sets to rocklike hardness within 45 minutes of application. No need to hold up or detour plant traffic. When lunch is over it's all ready to use and abuse. Write for prices and detailed information.

A Subsidiary of Sun Chemical Corporation

A. C. Horn Co., Inc.
Dept. H8-668, Long Island City 1, N. Y.

DIVISIONS OF SUN CHEMICAL CORPORATION
HORN • HUDSON • WILLEY (paints, maintenance and construction materials, industrial coatings) • WARWICK (textile and industrial chemicals) • WARWICK WAX (refiners of specialty waxes) • RUTHERFORD (lithographic equipment) • SUN SUPPLY (lithographic supplies) • GENERAL PRINTING INK (Sigmund Ullman • Fuchs & Lang • Eagle • American • Kelly • Chemical Color & Supply Inks) • MORRILL (news inks) • and ELECTRO-TECHNICAL PRODUCTS (coatings and plastics)

▲ For more details circle NED-389 F5 on enclosed inquiry slip ▲

BRAZING BOATS and TRAYS

For faster, dependable brazing with fewer rejects, hold parts or assemblies firmly in place on specially designed boats or trays of Stackpole carbon. Almost any desired shape or size can be supplied. Brazing alloys will not stick to them. Stackpole carbon supporting fixtures withstand severe thermal shock, permitting quick cooling and assuring exceptionally long life.

Write on letterhead for Catalog 40A.

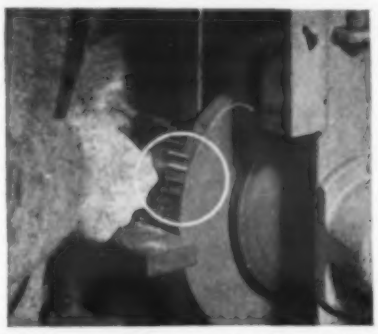
STACKPOLE

STACKPOLE CARBON COMPANY, *St. Marys, Pa.*

EVERYTHING IN CARBON BUT DIAMONDS

▲ For more details circle NED-390 F5 on enclosed inquiry slip ▲

The money they save!



Norton Reinforced Wheels add the

"TOUCH of GOLD" *to countless grinding jobs*

To top grinding quality, Norton Reinforced Wheels add great strength, long life and an unusual margin of safety. All four are resinoid bonded and reinforced by layers of fabric. As follows:

BF — Semi-flexible straight wheel, cotton fabric reinforcement. Also available in mounted wheels and points and hand sticks.
BN — Straight wheel with glass cloth reinforcement.
BD — Rigid hub-type. Glass cloth and Nylon reinforcement.
BFR — Semi-flexible hub-type, cotton fabric and Nylon reinforcement.

Ask your Norton Distributor for a demonstration in your shop, and for the new catalog on Reinforced Wheels. Or write to NORTON COMPANY, Worcester 6, Mass. Distributors in all principal cities. *Export:* Norton Behr-Manning Overseas Incorporated, Worcester 6, Massachusetts.

W-1639

NORTON *Making better products... to make your products better*

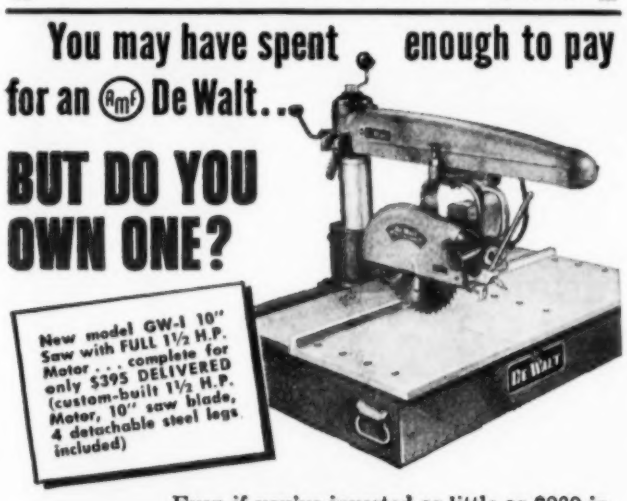
and its BEHR-MANNING division

NORTON COMPANY: Abrasives • Grinding Wheels • Grinding Machines • Refractories
BEHR-MANNING DIVISION: Coated Abrasives • Sharpening Stones • Pressure Sensitive Tapes

▲ For more details circle **NED-391 F5** on enclosed inquiry slip ▲

You may have spent enough to pay for an AMF DeWalt...

BUT DO YOU OWN ONE?



Even if you've invested as little as $239 in shop equipment you may not be enjoying the benefits of a DeWalt®. One low-cost AMF DeWalt...

- Does ALL the work of a swing saw, straight line cut-off and miter saw, table-type rip saw, dado machine, shaper plus many others.
- Saves you up to 60% in capital equipment investment.
- Saves you up to 75% in floor space.

These and many other AMF DeWalt advantages are explained fully in our *free* new idea book for industry. SEND FOR IT TODAY! Write AMF DeWalt, Dept. NED-6, Lancaster, Pa.

FREE! Send for new idea book on industry!

Another AMF Product DEWALT POWER TOOLS

▲ For more details circle **NED-392 F5** on enclosed inquiry slip ▲

CUT BLIND-LOCATION ASSEMBLY COSTS 50% with TINNERMAN TUBULAR-TYPE *Speed Clips*®

Here's a fastener that can be used on everything from toys to autos—on metal, plastic or wood. Perfect for attaching name plates, grilles, trim. Ideal for attachments where only one side of assembly is accessible. Eliminates threaded inserts, reduces material costs and handling. Wide range of sizes.

Write for Bulletin No. 330!

TINNERMAN PRODUCTS, INC.
Box 6688, Department 12, Cleveland 1, Ohio

Insert into molded or punched hole. Spring steel prongs lock Clip in position.

Line up second part of assembly and start unthreaded stud or rivet into SPEED CLIP.

End of Clip "bites" stud or rivet to make vibration-proof attachment, virtually nails parts together.

▲ For more details circle **NED-393 F5** on enclosed inquiry slip ▲

FIRE-PREVENTIVE DRUM COVER closes upon melting of fusible link

Any 55-gal or 30-gal steel drum, or corrugated trash can used as a receptacle for oily rags or work clothing, paints, solvents, packing materials or other combustibles can be made fire-preventive by means of this Thermo-Acting drum cover. Stamped from steel, red-painted cover is attached by a special hinge to steel strap which fits around upper part of drum. Hinge incorporates spring plunger which contains fusible link. Cover stands open normally for disposal of waste materials. In case of fire in or near drum, fusible link melts and cover is sprung closed. A thermo-closing cover for 11-in. diameter pail is also available. Made by **Protectoseal Co.**, 1966 S. Western Ave., Chicago 8, Ill.

▲ For more details circle **NED-394 F5** on enclosed inquiry slip ▲

TOOL CABINETS door and drawer-equipped models offered in various sizes, types

Top drawer of the model 107 Economy Chest, a four-drawer all steel chest that measures 26 x 12¼ x 12¼ in., has movable dividers, while the bottom drawer has a socket holding compartment. Cabinet, one of a line of four, has a built-in lock. Model 108 Super Duty Chest measures 28 x 15 x 21 in. and has one 5-in. deep drawer, two 3 in. deep and three 2 in. deep. Two top drawers have movable dividers.

Super Duty Chest model 109 is similar to No. 108, but has one 5-in., one 3-in. and two 2-in. deep drawers. Top drawer is compartmented and overall dimensions are 28 x 15 x 15¾ in.

Fourth new cabinet, model 275, has two 24¼ x 16 x 6-in. drawers, a 24½ x 18 x 11-in. lower compartment and a locking, hide-away front. It has disk-type casters and is designed to support the model 108 or 109 tool chest. Dimensions are 28 x 18 x 31⅝ in. Made by **Huot Mfg. Co.**, 571 N. Wheeler St., St. Paul W4, Minn.

▲ For more details circle **NED-395 F5** on enclosed inquiry slip ▲

Block out old stenciling with **Stencil-Kover**

Permits boxes, crates, cartons, drums to be re-stenciled and used again

- Tan-colored material in handy, efficient aerosol container completely covers over everything including old stenciling, crayon marks, printing, labels, etc. Dries quickly. Permits any container to be re-stenciled within 90 seconds and used again.

Always ready to use. No cans to open. No stirring. No brushes to clean. No waste. No drying out. No evaporation. A demonstration will convince you.

[*Ask us also about our quick drying waterproof Stencil Ink. Handy aerosol dispenser eliminates the muss and waste of fountain brushes and ball pots. 7 Colors.*]

REYNOLDS INK, Inc.
4504 EUCLID AVENUE, CLEVELAND 3, OHIO
Tell us more about your Stencil-Kover and Stencil Ink
☐ Send literature ☐ Ask your dealer to demonstrate
Name ..... Title .....
Company .....
Address .....

▲ For more details circle **NED-396 F5** on enclosed inquiry slip ▲

★ Heavy gray iron casting, accurately machined surfaces.
★ Power factor—15 times air line pressure of 5 to 150 lbs.
★ Throat clearance to center of 10" diam. circle.
★ Ram clearance 0 to 5", stroke 5/8", table 5" x 5".

This useful, high quality No. 80 SPEEDY AIR PRESS is the last word in air power engineering—the result of 34 years of specialization in diaphragm compression. Extremely sturdy, it does dozens of jobs formerly handled by expensive presses—and does them more quickly, easily and economically. Operated by Speedy Foot Control, Hand, or Fingertip Valves. Order from your supplier or write direct.

Write for New Catalog of Speedy Air Tools and Accessories
W. R. BROWN CORP., 2647 N. Normandy Ave., Chicago 35
AIR TOOLS • AIR VISES • AIR REGULATORS • FILTERS • COMPRESSORS

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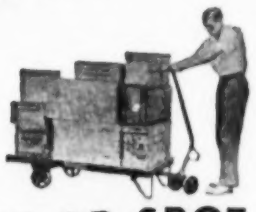
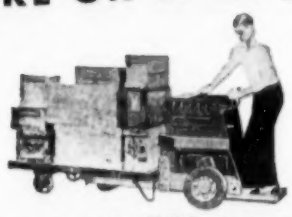
JAK TUNG "One-Handling" SYSTEM

TRUCK IT MANUALLY...



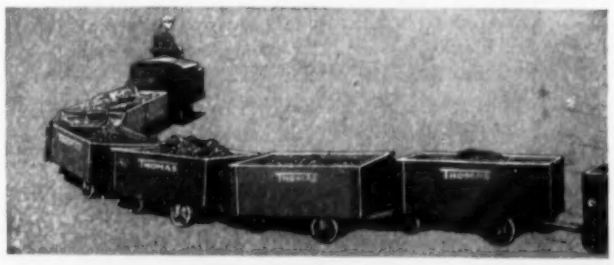
STORE OR SPOT IT...



MOVE IT BY POWER

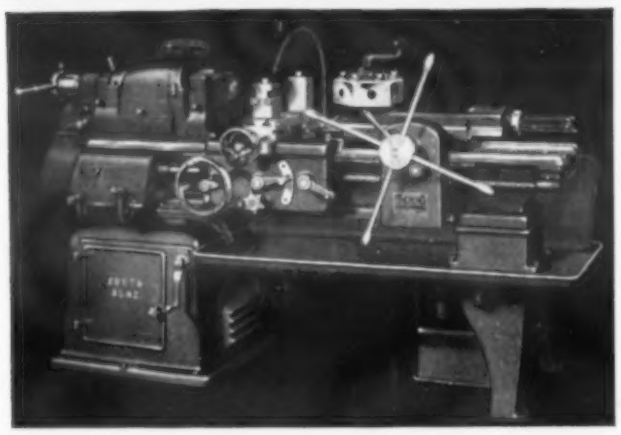
Move and store loads without rehandling. For long-distance moves, use a power lift platform or form lift truck... on short hauls, and when spotting or handling in close quarters, use the JAK-TUNG Lift Unit. Truck capacities from 1500 to 6000 lbs.—"Job-Suited" to your needs with many types of THOMAS Superstructures.

There is a THOMAS Representative in every Trade Area. Write for free literature describing the complete line of THOMAS "Job-Suited" Trailers, Trucks, Casters and Wheels.



THOMAS
THOMAS TRUCK & CASTER COMPANY
528 MISSISSIPPI RIVER, KEOKUK, IOWA

▲ For more details circle **NED-398 F5** on enclosed inquiry slip ▲



South Bend 2-H Turret Lathe less electrical equipment **$3190** f.o.b. factory

SOUTH BEND TURRET LATHE VALUE

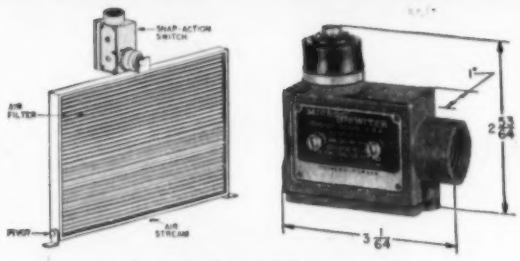
Speed, accuracy, ease of handling, durability, low operating costs and minimum of maintenance are some of the features that make the South Bend No. 2-H a better turret lathe value. Takes 1" through collet, 1⅜" through spindle, 16¼" over bed. Full quick change gear equipment provides 48 power feeds each for turret ram, universal carriage and cross-slide, plus 48 thread cutting feeds. Prompt delivery — time payment terms available. Write for catalog.

SOUTH BEND LATHE WORKS
Building Better Tools Since 1906 • South Bend 22, Indiana

▲ For more details circle **NED-399 F5** on enclosed inquiry slip ▲

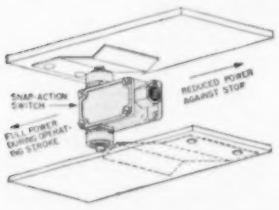
MICRO SWITCH Precision Switches
A PRINCIPLE OF GOOD DESIGN

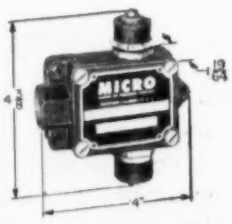
Make Your Present Plant Equipment SAFER • MORE AUTOMATIC and MORE PRODUCTIVE



Switch tells when air filter needs cleaning

• Switch is installed behind a remotely located air filter to notify maintenance men when it needs cleaning. Filter is mounted on a pivoted frame. When it becomes clogged with dirt, increase in air pressure pushes frame against the switch. This closes circuit to a warning lamp.





Switch saves wear on clutch and motor

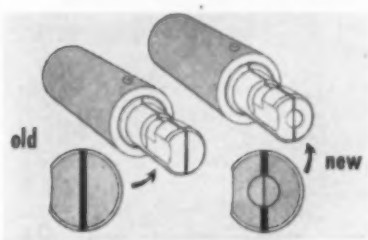
• This switch is used to prevent burning out clutch and motor on an electronic positioning device. The maintained-contact switch limits the power of the servodrive. The servodrive holds a power lever against stops at minimum and maximum stroke positions. The switch limits the power of the servodrive at the ends of the stroke, saving wear on the clutch and motor, while permitting full power for fast, accurate response over the major portion of the stroke.

There's a MICRO SWITCH *distributor near you with a full stock of switches plant engineers have found most useful. Look in the Yellow Pages under "Switches, Electric." Ask for Catalog 101.*

MICRO SWITCH
A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
In Canada, Leaside, Toronto 17, Ontario • **FREEPORT, ILLINOIS**

▲ For more details circle **NED-400 F5** on enclosed inquiry slip ▲

CABLE CONNECTOR utilizes double-cam locking



Improved model of Cam-Lok cable connector utilizes a double - cam action for a positive high pressure electrical cable connection. Male section of the solid brass connector is split and, when inserted in the female section, produces a strong wiping action. Tips of split halves are indented, limiting their travel and producing long tension life. Male part is protected while disengaged. Made by **Empire Products, Inc.**, Cam-Lok Div., Dept. E-23, P. O. Box 98, Cincinnati 36, O.

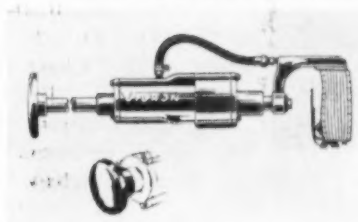
▲ For more details circle **NED-401 F5** on enclosed inquiry slip ▲

MINIATURE MICA CAPACITOR rated 1 to 510 mmfd at 300 v dc

Especially suited for use in printed circuits and other applications where compactness is essential, Dur-Mica DM-15 dipped mica capacitor measures only 7/16-in. long, 9/32-in. wide and 5/32 to 3/16-in. thick. Units are rated 1 to 510 mmfd at 300 v dc and up to 400 mmfd at 500 v dc. Maximum capacity tolerance is within ½-per cent. Units meet all RMA and MIL-C-5 specifications. Standard No. 22 wire leads have minimum length of 1½ in. Made by **Electro Motive Mfg. Co.**, Dept. NE, Willimantic, Conn.

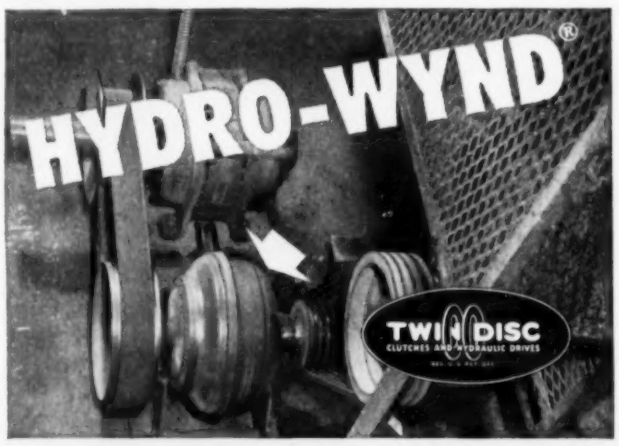
▲ For more details circle **NED-402 F5** on enclosed inquiry slip ▲

PNEUMATIC RAMMER for applying refractories



Downtime for application and patching of refractories can be minimized through use of the model G-162D pneumatic rammer which operates on shop air pressure. Light in weight and easy to handle, it delivers a controlled recoilless stroke and is used by the operator with little fatigue. Normally supplied with a 3-in. diameter circular ramming head, the rammer can be equipped with shafts of varying lengths and heads with larger or smaller diameters or irregular shapes. Made by **Burgess-Sterbentz Corp.**, Vibron Div., 3790-N W. 150th St., Cleveland 11, O.

▲ For more details circle **NED-403 F5** on enclosed inquiry slip ▲



Masterminds winding operations with FLUID DRIVE

Here is the most *economical*, most *dependable* solution to automatic control of your winding operations on textiles, paper, steel, plastic, rubber, wire, foil, etc. By incorporating a fluid coupling with a planetary gear set, the Twin Disc HYDRO-WYND *automatically maintains predetermined tensions* while the roll rpm *decreases* and roll diameter *increases*. Now available in new Model 12.2, as well as 8.4. Write Dept. DS for *Bulletin 163-A*.

TWIN DISC
TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

▲ For more details circle **NED-404 F5** on enclosed inquiry slip ▲

Extra-Tough JOBS Call for EXTRA-DEPENDABLE POWER

The more you have to gain through uninterrupted performance, the more you need the extra dependability of Red Seal* heavy-duty air-cooled power. Carter center-bowl type carburetor, improved manifolding, valving and cooling, join with greater displacement to give you more "lug" at low speeds —more usable power at high—greater dependability and economy throughout the entire range.

MODEL AUB5
NOTE COMPACTNESS—This 3-h.p. engine is 13⅛" high.

OPTIONAL RED SEAL FEATURES

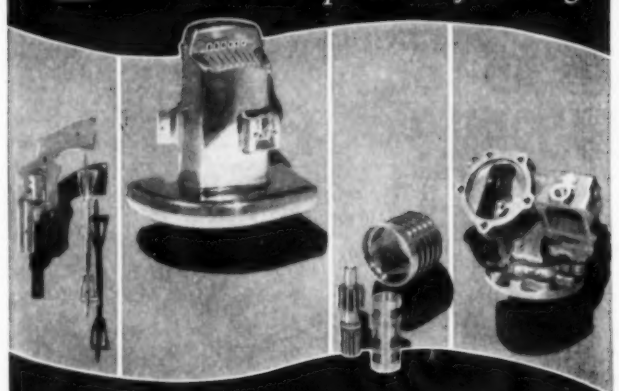
Patented, exclusive Contex* external ignition system, instantly accessible for adjustment or repair . . . Automatic ignition cut-off stops engine if oil level falls dangerously low . . . New, sure-grip recoil starter assures instant starting every time . . . 6:1 reduction gear may be mounted in any of four positions . . . Engines may be had for operation on kerosene.

*TM REG. **SERVICE FACILITIES AND RED SEAL PARTS AVAILABLE EVERYWHERE**

Continental Motors Corporation
AIR-COOLED INDUSTRIAL ENGINE DIVISION
12800 KERCHEVAL AVENUE • DETROIT 15, MICHIGAN

▲ For more details circle **NED-405 F5** on enclosed inquiry slip ▲

ROTO FINISH — *your new opportunity in controlled precision finishing*



Roto-Finish processes are controlled precision finishing operations using low cost mass production techniques, which maintain exact tolerances on most any size or shape precision part with no significant dimensional changes. Roto-Finish speeds production, cuts maintenance expense, minimizes operational costs, yet produces top quality finishing results. Roto-Finish offers latest in controlled methods, materials and special purpose fixture equipment.

Write for catalog today! Ask about free Lab Testing Plan.

Roto-Finish COMPANY
3702 MILHAM ROAD, KALAMAZOO, MICH. P. O. Box 988 — Phone 3-3578

visit our booth | No. 394 at Industrial Finishing Exposition, June 20 - 23 at Cleveland Public Auditorium

▲ For more details circle **NED-406 F5** on enclosed inquiry slip ▲

NORTHERN

NEW HEAVY DUTY HI-LIFT HOISTS

For severe, continuous service this new NORTHERN HI-LIFT ELECTRIC HOIST, in capacities from three to 15-tons, has double 4-wheel swiveled trucks for better distribution of load, to minimize wear on truck wheels and track, and other heavy duty features necessary to meet the hardest service requirements.

Send for Bulletin H-112

LOOK OVERHEAD — SEE NORTHERN

NORTHERN ENGINEERING WORKS
210 CHENE ST., DETROIT 7, MICH.

EH-3554

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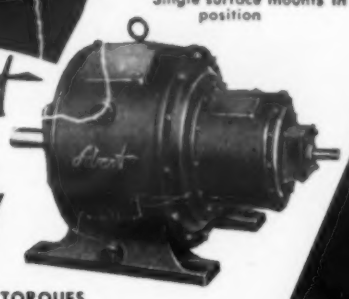
the inside word on Abart Quality



RATINGS
Very conservative
MOUNTINGS
Single surface mounts in any position

TORQUES
Absorbed by heavy cast gear case
RATIOS
Standard and specials
GEARS
Nickel Bronze
WORMS
Integral with shaft; hardened and ground
BEARINGS
Sealed Ball Bearings
SEALS
Neoprene
SHAFTS
Special tough Alloy Steel (200-300,000 Tensile), ground
HOUSING
Semi-steel precision machined
ENCLOSURES
Drip-proof. Totally enclosed

• COMPACT
• EFFICIENT
• LONG-LASTING

ABART SPEED REDUCERS

Over 75 types and sizes —spur, worm and combination. Ratings from 1/50 to 168 hp., with ratios up to 10,000 to 1.

Specials on application.

Write for pocket-size Abart catalog today.

Abart GEAR AND MACHINE CO.
4826 West 16th Street • Chicago 50, Illinois

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No. 1 in 50,000 Firms

Because It Outlasts Ordinary Brushes 3 TO 1

27 Speed Sweep styles and sizes to meet every sweeping need. Write for prices today.

MILWAUKEE DUSTLESS BRUSH CO.
530 N. 22nd Street *Milwaukee 3, Wis.*

▲ For more details circle NED-409 F5 on enclosed inquiry slip ▲

BRING YOUR "SPECIAL" PROBLEMS TO National

Cold heading "Specials" can lower fastener costs!

When you have any "Special" fastening problem . . . requiring an unusual type of bolt, nut, screw, pin or headed or threaded part . . . our engineers can help you design it . . . and we can produce it economically on our wider range of cold heading equipment and specialized machinery.

For prompt assistance in solving your "Special" problems, just send us your specifications or call in your nearest National representative for full information on National's "Special Products Service" and the most complete line of standard fasteners for industry.

★ ★ ★

Representatives in Chicago, Cincinnati, Detroit, New York, Philadelphia, Kansas City, Milwaukee, Rochester, Denver, St. Louis, San Francisco, or Seattle—write or call direct to:

THE NATIONAL SCREW & MFG. CO.
2440 East 75th St., Cleveland 4, Ohio

▲ For more details circle NED-410 F5 on enclosed inquiry slip ▲

MINIATURE PILOT LIGHTS
several types are available

Suitable for use in appliances as well as in wide range of electrical equipment, miniaturized indicator lights snap in place for quick assembly. These small low-cost assemblies can be supplied with wire leads or blade type quick-disconnects and built-in resistors. Latter eliminate the need for transformers or series hook-ups. A wide range of lens colors and configurations is offered as well as special shapes in form of company trademarks or other shapes. Made by **Ucinite Co.**, 459-N Watertown St., Newtonville 60, Mass.

▲ For more details circle NED-411 F5 on enclosed inquiry slip ▲

LONG HANDLE PAINT ROLLER
for hard-to-reach fence sections

The 10-in. long hardwood handle of this lambs-wool paint roller enables average height workers to coat hard-to-reach wire fence sections without stretching or stooping. Handle plus wire connecting shaft provides reach of 20½ in. Shaft penetrates only half-way into handle so that handle can be shortened for alternate use. The 7-in. roller has 1½-in. thick nap which reaches around fence wire to coat about 70 per cent of other side of fence in one operation. Made by **Rust-Oleum Corp.**, 2799 Oakton St., Evanston, Ill.

▲ For more details circle NED-412 F5 on enclosed inquiry slip ▲

AXIAL FLOW FANS
described in industrial film

"Industrial Axial Flow Fans" is title of 16-mm sound motion picture film which describes the three basic types of axial flow fans, their inherent characteristics and methods of testing. Film discusses static pressure limitations of propeller fans, noise levels of these units and method of determining reliable fan performance and rating data. It runs 12½ minutes and can be shown on any 16-mm sound projector. For details, write **Aerovent Fan Co.**, 758 E. Ash St., Piqua, O.

▲ For more details circle NED-413 F5 on enclosed inquiry slip ▲

". . . . and under the picture say that my new assistant proposed packaging in Clearsite Plastic Containers."

Choose from a wide selection of feather-light, sparkling-bright, shatter-proof Clearsite Containers, or have special sizes made to your specifications. Any trademark or label can be multi-color printed right on the container.

Write for free samples and descriptive literature.

CELLUPLASTIC CORPORATION
General Offices:
44 Avenue L, Newark 5, N. J.

▲ For more details circle NED-414 F5 on enclosed inquiry slip ▲

TOUGH ON THE HANDS

Protect skilled hands from sharp-edged metal with Jomac® Work Gloves. Tough, resilient Jomac Gloves cost little, wear like iron, can be cleaned repeatedly. Jomacs keep safety records up, insurance rates down.

Style No. 686

Send for trial order of 1 doz. No. 686 at gross lot price. Write for new Jomac catalog. Jomac Inc., Dept. G, Phila. 38, Pa.

JOMAC
Industrial Work Gloves
Outwear ordinary work gloves by 900%
Plants in Philadelphia, Pa., and Warsaw, Ind.

▲ For more details circle NED-415 F5 on enclosed inquiry slip ▲

LEXCO HYDRAULIC LIFT TABLES

save *money, time and energy*

Lift heavy castings, dies, machine accessories and other heavy articles—Use as adjustable work bench—Welder's positioning table—Leveling Table for Presses, conveyors, loading trucks, etc. Many other uses too numerous to mention.

- A new specially engineered method to give hydraulic power and ease. Table capacity 2000 lbs.—Hydraulic unit 3000 lbs.
- Table is 30" long by 20" wide by 30" overall height with an 18" raise to 48" overall height—hand pumped—¼" per stroke. Lowered fast or slow with simple release valve.
- Equipped with floor lock to anchor truck in position; controlled by foot pedal, toe release.
- Mounted on Two 5" rigid casters and two 5" swivel casters. All casters with bearings in axles.
- A safety first item to eliminate fractured limbs and strained muscles.

list **$169** f.o.b Lansdale, Pa. *Distributorships available.*

LEXCO ENGINEERING & MFG. CORP.
P. O. BOX 161—DEPT N. COLMAR, PA.

▲ For more details circle NED-416 F5 on enclosed inquiry slip ▲

It gives you in clear, concise form, step-by-step directions for joining ferrous and non-ferrous pipe and tubing with the fast, reliable, economical low-temperature silver brazing alloys EASY-FLO and SIL-FOS. It tells how to – cut and fit – clean – flux – support assemblies – heat and flow the alloys – clean after brazing. Write for a copy.

ASK FOR BULLETIN 17

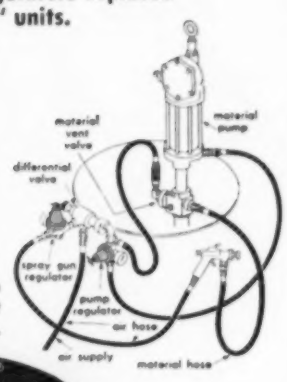
HANDY & HARMAN 82 Fulton St., New York 38, N. Y.
Distributors in Principal Cities. In Canada: Handy & Harman of Canada Ltd., Toronto

▲ For more details circle NED-417 F5 on enclosed inquiry slip ▲

competitive tests by LINCOLN ENGINEERING CO.

Prove Norgren Pressure Regulators

- have a larger flow capacity at pressures up to 80 psi
- give better pressure control
- result in cost savings because ½" Norgren Regulators replaced ¾" units.



As a result of these tests Norgren Regulators are standard equipment on Lincoln Material Dispensing Pumps.

Norgren C. A. CO. 3405 So. Elati, Englewood, Colo.

Write for Norgren Blueprint No. 119

▲ For more details circle NED-418 F5 on enclosed inquiry slip ▲

Better rubber products are made with Du Pont NEOPRENE

Neoprene tank car coatings give over 4½ years' service in shipping hot caustic

As industry's use of pure, rayon-grade caustic soda has increased over the years, so has the problem of preventing iron contamination to the caustic during shipment in steel tank cars. Linings based on neoprene latex have proved to be the answer in keeping tank car contents pure. Columbia Southern Chemical Co., one of the country's large caustic producers, reports that in transporting 50 and 73 per cent solutions, these durable neoprene coatings give them more than 4½ years' protection.

Temperatures for the caustic run as high as 250°F. on loading and 170°F. at point of delivery. Yet the rugged neoprene linings resist deterioration from the caustic . . . retain their effectiveness trip after trip. Columbia has had similar success in coating tank car exteriors and lining caustic storage tanks. In both cases, neoprene is giving over 3 years' service.

Other leading caustic producers are also using these versatile coatings in similar capacities. It's a good example of the way neoprene solves problems common to industry —and you can rely on that same kind of performance with other neoprene products—V-belts, hose, gloves and conveyor belts.

FREE! THE NEOPRENE NOTEBOOK

Every issue describes new products, unusual applications of neoprene . . . shows how neoprene cuts maintenance costs. Clip and mail this coupon to get on the mailing list. E. I. du Pont de Nemours & Co. (Inc.), Elastomers Division NE-6, Wilmington 98, Delaware.

NEOPRENE

The rubber made by Du Pont since 1932

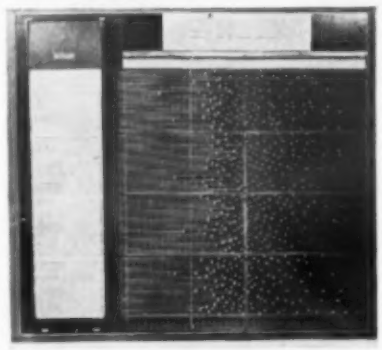
DU PONT

REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

▲ For more details circle NED-419 F5 on enclosed inquiry slip ▲

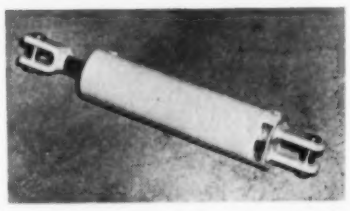
PRODUCT CONTROL BOARD keeps track of short-run jobs



Keeping track of scores of short-run jobs to maintain promised delivery dates is facilitated with these Produc-Trol boards. All orders are placed on boards in such a way that everything behind schedule can be seen at a glance each day. Time-consuming search of records is eliminated, and approaching bottlenecks and delays are spotted in time to take corrective action. Boards are made by **Wassell Organization, Inc.,** Dept. NE, 11 Sylvan Rd., Westport, Conn.

▲ For more details circle NED-420 F5 on enclosed inquiry slip ▲

HYDRAULIC CYLINDERS 1½ to 5-in. bores, strokes to 10 ft

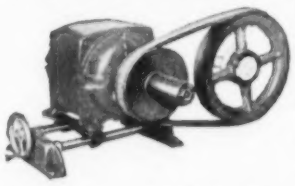


Line of hydraulic cylinders for agricultural and industrial uses is made of roller burnished seamless mechanical tubing with aluminum pistons and heads. Bores from 1½ to 5 in. and strokes up to 10 ft are available in agricultural cylinders with 1500-psi working pressure and industrial cylinders with 2500-psi working pressure. Convertible feature provides single or double action or stroke control feature in one unit. Variety of end fixtures, packings and accessories is available. Made by **HemcO Mfg., Inc.,** Dept. D, Argonia, Kans.

▲ For more details circle NED-421 F5 on enclosed inquiry slip ▲

VARIABLE SPEED PULLEY provides ratios up to 3 to 1

Easily and quickly installed on new or old equipment, this variable speed pulley provides speed changes up to a 3-to-1 ratio at from 7½ to 15 hp.



Changes in speed can be made while machinery is in motion. Used in conjunction with a 1750 rpm motor, maximum horsepower is 10 or 15, depending upon which of two bases is used. Maximum horsepower with an 1150 rpm motor is 7½ and 10 hp, respectively, with the same bases. Belt used is a Lovejoy No. 27 variable speed type with 2¾-in. top width. Standard bores are 1¼, 1⅜ and 1⅝ in. Made by **Lovejoy Flexible Coupling Co.,** 4803 W. Lake St., Chicago 44, Ill.

▲ For more details circle NED-422 F5 on enclosed inquiry slip ▲

Airtherm HEATING EQUIPMENT

The Airtherm line of heating equipment has an outstanding performance record in installations throughout the country.

Eye-pleasing, easy-to-install Airtherm units eliminate service call worries. You'll find your customers are proud to own . . . glad to recommend—Airtherm.

Ask your Wholesaler or write for catalogs and complete information.

FOR HEATING SATISFACTION . . . THINK FIRST OF

Airtherm MANUFACTURING COMPANY 716 South Spring Avenue • St. Louis 10, Missouri

▲ For more details circle NED-423 F5 on enclosed inquiry slip ▲

Sier-Bath Flexible Gear Couplings give

ALL THIS CAPACITY

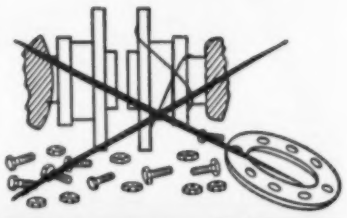
Compare size—ratings—weight

Max. Bore	Outside Dia.	Cap. HP/100 R.P.M.	Wgt. Lbs. Rough Bore
1⅜	3¾	12	9
2⅜	5½	48	21
3⅛	6⅝	80	39
4⅛	8¾	200	58
6	11¼	500	134

Typical sizes chosen. Other sizes in proportion.

—WITHOUT ALL THIS COMPLEXITY

Sier-Bath Flexible Gear Couplings have a simple, 7-part design—no bolts, no nuts, no flanges. Carry required loads in 3/5 usual weight, 1/2 usual size. Coupled and uncoupled in seconds. Lower moment of inertia permits high speeds, less strain on shafts, bearings, armatures. Full protection against angular and offset misalignment and end float. Consult "Yellow Pages" for nearest representative—or write for Catalog C-4.



Sier-Bath GEAR & PUMP CO., INC 9240 Hudson Blvd., North Bergen, N. J.

50th Anniversary • Member A.G.M.A.

Also Mfrs. of Precision Gears, Rotary Pumps

Sier-Bath Flexible GEAR COUPLINGS

▲ For more details circle NED-424 F5 on enclosed inquiry slip ▲

MARSHALLTOWN

ROTARY THROATLESS SHEARS

Capacities from 18 Gauge to ½"

Cuts any SIZE . . . any SHAPE

America's finest for every cutting job—straight, irregular or circular patterns.

Speedy—up to 6 ft. per minute. Efficient, easy to operate.

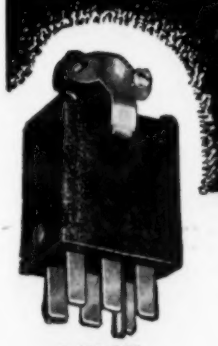
Built for extra heavy duty use. High grade tool steel cutters.

Write today for details and prices.

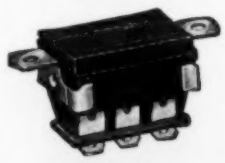
MARSHALLTOWN MFG. CO., Marshalltown 2, Iowa

▲ For more details circle NED-425 F5 on enclosed inquiry slip ▲

FOR PUBLIC ADDRESS, RADIO, and kindred fields, specify JONES 400 SERIES PLUGS AND SOCKETS *of proven quality!*



P-406-CCT



S-406-AB

Double Contact Area

Phosphor bronze knife-switch socket contacts engage both sides of flat plug contacts.

Socket contacts phosphor bronze, cadmium plated. Plug contacts hard brass, cadmium plated. Insulation molded bakelite. Plugs and sockets polarized. Steel caps with baked crackle enamel. 2, 4, 6, 8, 10, 12 contacts. Cap or panel mounting.

Information on complete line, in Jones Catalog 20: Electrical Connecting Devices, Plugs, Sockets, Terminal Strips. Write

Jones HOWARD B. JONES DIVISION CINCH MANUFACTURING CORPORATION CHICAGO 24, ILLINOIS SUBSIDIARY OF UNITED-CARR FASTENER CORP.

▲ For more details circle NED-426 F5 on enclosed inquiry slip ▲

FOR HIGHER THAN AVERAGE PRESSURES OF AIR, WATER

HAMILTON VARI-PURPOSE Industrial HOSE

OIL, SUN AND ABRASION-RESISTANT COVER

Tough, abrasion-resistant cover inseparably bonded to a specially compounded, oil-resistant tube, reinforced with highest quality CORDURA braided rayon cord.

A single hose to handle almost any maintenance job. Tough, resilient, durable; will carry a wide range of materials. A general purpose hose of long life and low net cost.

Available in standard lengths. Red or black covers. Sizes ¼" to 1½" I.D. with working pressures 125-300 pounds. See your local distributor.

HAMILTON RUBBER MFG. CORP.

Executive Office and Factories, 103 Meade St., Trenton, N.J.

Be sure . . . use Hamilton . . . Always dependable!

For more details circle NED-427 F5 on enclosed inquiry slip

Here's the most

VERSATILE CRANE you can buy!

THIS BROCHURE describes the full line, complete with all specifications.

Available in seven models, with capacities from one-half to three tons. Every Tubarcrane has a three-position built-in extension boom—no extras to buy! Pumping effort is easily adjustable. Tilt-back mast provides more area for lifting bulky loads. Write for literature today!

Tubar CRANE

Manufactured by UHRDEN, INC. • DENNISON, OHIO

Jobber Territories Available

Also request literature on Tubar Hand Trucks, Platform Trucks, Tubarlifts

U-255-105

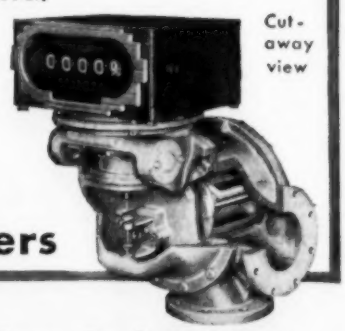
For more details circle NED-428 F5 on enclosed inquiry slip

Account For Corrosive Liquids

ALCOHOLS, VEGETABLE OILS, DEIONIZED WATER, ETC.,

with

Rockwell "316" Stainless Steel Meters



Cut-away view

Be Sure of Your End Product

Want the finest degree of *quality control* in your formulations? Need accurate *cost controls* over liquid ingredients? Is *inventory* a problem? Are *losses* eating into your profits? Then turn to a basic accounting tool—*Rockwell liquid meters.* Get the accurate metered records you need to operate efficiently. Available in a wide variety of types, materials and sizes to suit every requirement. Our bulletins tell all. Write today.

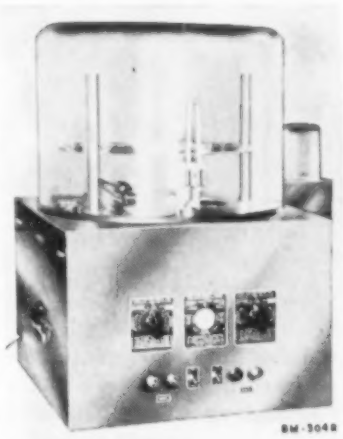
YOU CAN RELY ON ROCKWELL

ROCKWELL MANUFACTURING COMPANY

DEPT. 112-F PITTSBURGH 8, PA.

For more details circle NED-429 F5 on enclosed inquiry slip

TEST CABINET controls temperature and humidity



Hermetically sealed lead-in terminals and adjustable air flow makes the Vapor-Temp temperature controlled relative humidity cabinet suitable for short and long-term tests, including those for most MIL and JAN specifications. Humidity is automatically controlled from 20 per cent to near saturated, at any point, depending upon dry bulb temperature. Cabinet uses an inverted 16 x 12-in. Pyrex jar as the work chamber. It is placed on a welded 18-8 stainless steel cabinet which houses wet and dry bulb controls, heavy duty motor, corrosion-resistant motor, cooling coil and solenoid valve. Electric rating is 1200 w, 115 v, 60 cycles ac. Made by **Blue M Electric Co.**, 138th & Chatham St., Blue Island, Ill.

For more details circle NED-430 F5 on enclosed inquiry slip

INTERCOM SYSTEM have wall-mounted master stations as well as provision for paging

In addition to two-way communication, this model 6000 electronic intercommunicating system provides facilities for paging. Special paging button on master stations permits all stations to be called at once. Central 30-w amplifier provides power for operation of as many as six master stations which can be equipped with earphone for confidential conversation, as desired.

Each master station can originate calls to five other master stations, and can accept and answer calls from any number of similar stations. Replies can be made from across the room, without leaving work or approaching the station. Trumpet stations and remote type staff stations are available for use in system. Signal indicates when system is busy. Flush and surface wall-mounting type master stations are offered. System operates on 110-120-v 60-cycle ac. Made by **Executone, Inc.**, Dept. C, 415 Lexington Ave., New York 17, N. Y.

For more details circle NED-431 F5 on enclosed inquiry slip

KELLER AIR MOTORS

- Compact design with high power-to-weight ratio. Enclosed construction.
- Efficient with either high or low air pressure.
- Positive-acting, piston-type, constant torque motors with infinitely variable speed in either direction.
- ½ To 2¾ hp in a wide range of speeds and torques.

Send for illustrated descriptive Bulletin No. 70

KELLER TOOL

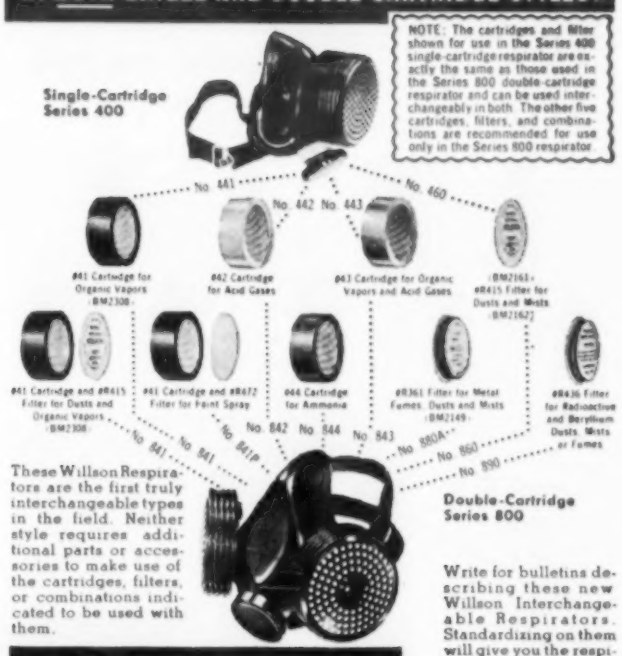
DIVISION OF GARDNER-DENVER

GRAND HAVEN, MICH.

For more details circle NED-432 F5 on enclosed inquiry slip

NOW.. WILLSON INTERCHANGEABLE RESPIRATORS IN BOTH SINGLE AND DOUBLE CARTRIDGE STYLES!

NOTE: The cartridges and filter shown for use in the Series 400 single-cartridge respirator are exactly the same as those used in the Series 800 double-cartridge respirator and can be used interchangeably in both. The other five cartridges, filters, and combinations are recommended for use only in the Series 800 respirator.



These Willson Respirators are the first truly interchangeable types in the field. Neither style requires additional parts or accessories to make use of the cartridges, filters, or combinations indicated to be used with them.

Write for bulletins describing these new Willson Interchangeable Respirators. Standardizing on them will give you the respiratory protection you want and simplify your inventory as well.

More than 300 safety products carry this famous trademark

WILLSON Established 1870

WILLSON PRODUCTS, INC.

219 Washington Street

Reading, Pennsylvania

For more details circle NED-433 F5 on enclosed inquiry slip

In a HURRY for Wire Rope?

BERGEN'S fast service will supply it

Bergen Wire Rope Company's special "streamlined" production assures extremely fast deliveries—just tell us what you want, and your order will be speeding on its way in a jiffy.

Need?

- Standard or special construction wire rope
- Conventional or unique assemblies with swaged, spliced or socketed fittings
- Stranding of conductive, non-conductive or combination wires or cables . . . *specify* BERGEN

Special methods plus top quality materials, rapid fabrication and highest skilled workmanship guarantees you maximum economy.

Write today for quotes and literature.

BERGEN WIRE ROPE COMPANY

505 GREGG STREET

LODI, NEW JERSEY

SERVING THE LEADERS OF INDUSTRY

For more details circle NED-434 F5 on enclosed inquiry slip

They're Rugged!

Watson-Stillman Hand Pumps and Hydraulic Jacks

W-S Pumps are available with maximum pressure deliveries of 3,000 to 10,000 psi. Single and double plunger type . . . can be mounted on any size reservoir. Use with light oil, water with soluble oil or plain water. Excellent for operating hydraulic tools, jacks, presses and other hydraulic equipment . . . and for general hydrostatic testing.

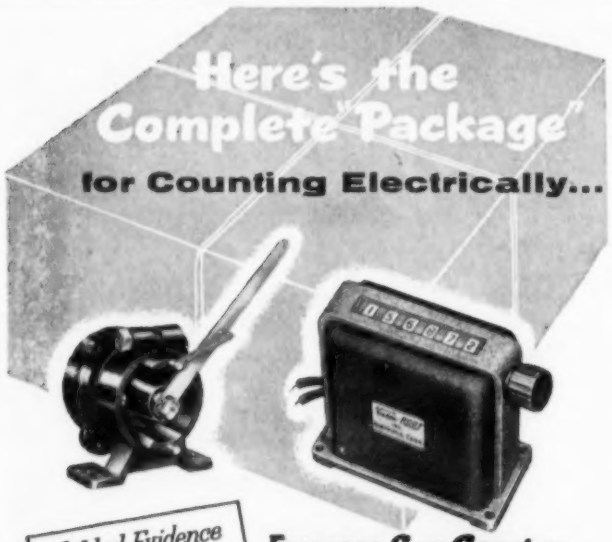
W-S Hydraulic Jacks with independent pumps are used for many construction and maintenance jobs. Jack is connected to pump by flexible copper tubing . . . ideal for operation in inaccessible or dangerous locations. Capacities . . . 20 to 500 tons.

Write today for Bulletin A-5.

WATSON-STILLMAN FITTINGS DIVISION
HKP H. K. PORTER COMPANY, INC.
Roselle, New Jersey

1A

▲ For more details circle NED-435 F5 on enclosed inquiry slip ▲



Added Evidence that — Everyone Can Count on VEEDER-ROOT

This Veeder-Root Reset Magnetic Counter (AC or DC) is actuated through electromagnets. And it may be connected in series with any device having a contact arrangement . . . like the specially designed Veeder-Root Electrical Contactor at the left, which insures positive operation of the counter, either in oscillation or connected directly to a revolving shaft . . . with the counter placed at *any* distance from the machine or process on which the count is required.

VEEDER-ROOT INC.® Hartford 2, Conn.

▲ For more details circle NED-436 F5 on enclosed inquiry slip ▲

▲ For more details circle NED-437 F5 on enclosed inquiry slip ▲

MACHINERY SPEED METER
measures straight-line speeds

Portable, easily operated Celerimeter can measure the straight-line speed of moving sections of fixed machinery and equipment in range from 5 to 30,000 ipm. It has a synchronous motor indicator which measures in 1/100-second intervals. Instrument weighs 26½ lb, operates on 110 v, 60 cycles and is supplied in a 9 x 9 x 21-in. case. Made by **Lake Erie Engineering Corp.**, 570 Woodward Ave., Buffalo 17, N. Y.

▲ For more details circle NED-438 F5 on enclosed inquiry slip ▲

CONTOUR SAW
for tool and die work

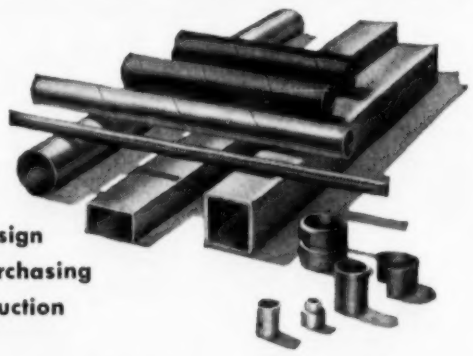
Table of the Journeyman 20-in. tool and die contour saw moves front to back into the blade for cut-off operations. No hydraulic equipment or extra motor are required. Table traverse is by means of a foot pedal controlled counterweight. Saw has other conventional equipment common to this type of saw, plus optional welder for blades and file attachment. Made by **Roll-In Saw Co.**, Dept. J, Parma, Mich.

▲ For more details circle NED-439 F5 on enclosed inquiry slip ▲

PARKING LOT BARRIERS
car stops are easy to install

Used in conjunction with 4 x 4-in. wood timbers, malleable iron car stops are easy to install by merely driving the 12-in. steel lag bolt into macadam, black top or gravel parking lot surface. Strong and economical, barriers provide means for assuring uniform parking in industrial plant parking areas. Tire action is anchoring factor, and shear on lag bolts is minimized. Made by **Superior Steel & Malleable Castings Co.**, Dept. D, Graham Ave., Benton Harbor, Mich.

▲ For more details circle NED-440 F5 on enclosed inquiry slip ▲



improve design
simplify purchasing
speed production
with

C-D-F SPIRAL TUBING

Looking for low-cost tubing to reduce unit costs and improve product performance? Consider the use of C-D-F Spiral Tubing, a high strength plastic made from paper or fibre that is spirally wound and cured at high temperatures. In many cases it can replace rolled or molded laminated plastics . . . at a good cost saving. Small sizes, thin walls are not a problem. For many applications, dimensional stability and moisture resistance is excellent. Coil forms, insulating tubes, paint roller tubes, shipping containers, bushings are just a few applications. Write today for 8-page Technical Folder ST-53, giving properties, sizes, tolerances on impregnated and unimpregnated round, square and rectangular C-D-F Spiral Tubing. Well illustrated. Call your C-D-F sales engineer (offices in principal cities) — he's a good man to know!

CDF Continental-Diamond Fibre
CONTINENTAL-DIAMOND FIBRE COMPANY, NEWARK 30, DELAWARE

▲ For more details circle NED-441 F5 on enclosed inquiry slip ▲

For CORSET FAT or CARGO STRAP there's a BUFFALO WEBBING for just that!

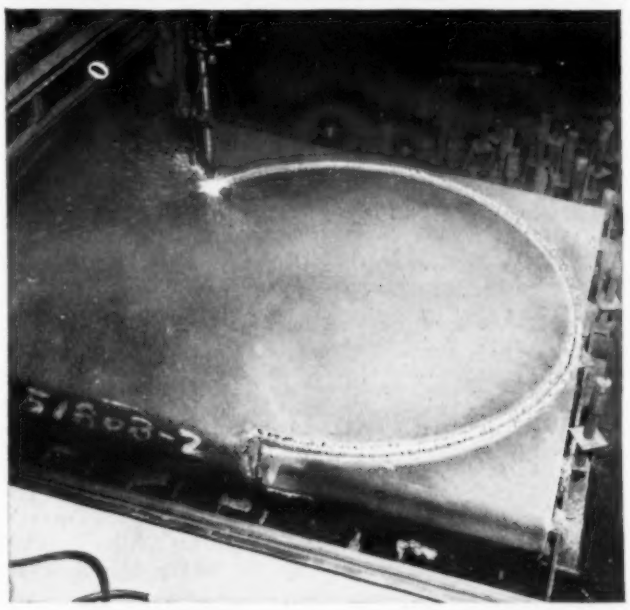
We'll bet you can't stump us on a webbing for your product! That's because we have hundreds of different STANDARD sizes, widths, weights, solid colors and patterns . . . plus the "know-how" to produce ANY "special" at the price you like.

WRITE for samples and prices

★ STRONG! ★ PLIABLE! ★ ADAPTABLE!

BUFFALO WEAVING and BELTING CO., INC.
209 CHANDLER ST. BUFFALO, N. Y.

▲ For more details circle NED-442 F5 on enclosed inquiry slip ▲



Fast, efficient cutting of stainless and alloy steels

You can cut stainless and other hard-to-cut steels faster, easier, better and at less cost with NCG's Ferrojet® powder cutting equipment. NCG's improved powder dispenser gives a uniformity of powder flow unsurpassed by dispensers costing two to three times more. And NCG's new Ferroflame® powder burns faster with higher heat concentration than conventional powders. Dispenser, powder and NCG's cutting and flame washing torches, plus NCG's technical assistance, make an unbeatable combination for doing a better job at less cost. Write for literature describing Ferrojet equipment and explaining the powder cutting process.

Complete, Mobile Ferrojet® Dispenser Outfit

Mounted on a standard, two-wheel gas cylinder truck, the dispenser plus a cylinder of either compressed air or Nyrogen® make a mobile, easy-to-handle outfit. Dispenser does not require electricity . . . can be operated anywhere.

Copyright 1955, National Cylinder Gas Company

NCG® NATIONAL CYLINDER GAS COMPANY
840 N. Michigan Avenue, Chicago 11, Ill.

▲ For more details circle NED-443 F5 on enclosed inquiry slip ▲

If you use steels, here's the handbook you should have

This handbook, "Alloy Steels Pay Off," is a must for you if you use steel. Here, in completely documented form, you'll find how the use of alloy steels adds economies, increases service life, offers many other advantages.* Cost-conscious executives will find the full story on these economies of alloy steel in the first section of the handbook. Designers and metallurgists will find the advantages of alloy steels in the 60 case histories. Get your copy today. Write: Dept. 18, Climax Molybdenum Company, 500 Fifth Avenue, New York 36, New York.

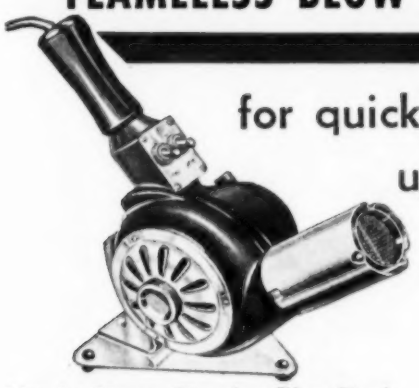
*** Advantages of ALLOY STEELS**
- longer life
- greater pay load
- lower operating costs
- greater safety
- less maintenance

MS5-20

CLIMAX MOLYBDENUM

▲ For more details circle **NED-444 F5** on enclosed inquiry slip ▲

FLAMELESS BLOW TORCH



for quick heat up to *750°*

Use the Mamco Flameless Blow Torch on any application requiring a concentrated hot air blast. You can soften, form, mold and patch plastics, etc. easily with safety . . . The Mamco Flameless Blow Torch gives you quick heat up to 750° *without flame.*

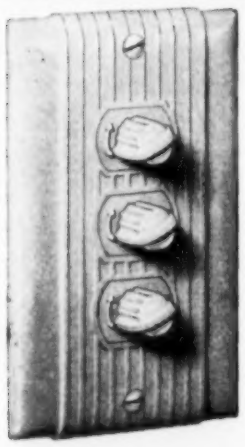
Powerful Mamco electric motor 110-120 Volt AC and DC. Turbo type fan provides steady, strong air blast. Eight foot heavy duty cord. Double jacketed heater housing. Adjustable air intake. Order direct.

Price $28.50

WRITE DEPT. N.

Master APPLIANCE MFG. CO. RACINE, WISCONSIN

▲ For more details circle **NED-445 F5** on enclosed inquiry slip ▲



- It's a ROTO switch!
- It's a LUMINOUS switch!
- It's a QUIET switch

that handles:

FLUORESCENT LOADS
INDUCTIVE LOADS
INCANDESCENT LAMP LOADS
MOTOR LOADS

NEW *ROTO-GLO* Trade Mark

Quiet Switch

– because switches should be SEEN . . . not heard

New bulletin tells all — write Dept. 415 for it today.

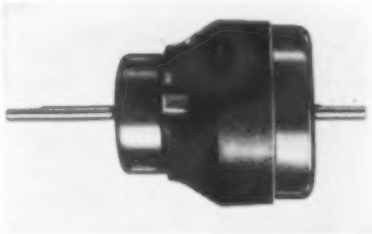
PASS & SEYMOUR, INC.

SYRACUSE 9, N.Y. 4.15

OFFICES: 71 Murray St., New York 7, New York; 1229 W. Washington Boulevard, Chicago 7, Illinois.

▲ For more details circle **NED-446 F5** on enclosed inquiry slip ▲

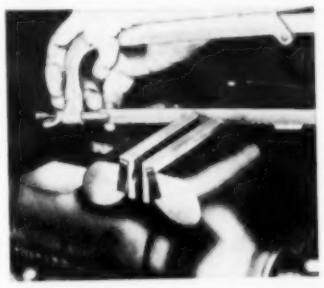
SHADED-POLE MOTOR
115-v models rated 1/60 to 1/30-hp



Offered with operating speeds of 900 and 1550 rpm, SP-25 four-pole shaded-pole motor is rated 1/60 to 1/30-hp for operation on 115-v ac. Stable speeds as low as 400 rpm can be delivered at reduced voltages. Motor housing and single bearing are integrated in cast housing to assure alignment. Lubrication system consists of thermally isolated 50-cc reservoir of special oil and self-contained circulating system. Extremely quiet in operation, motor can be used to power blowers, pumps and fans. Made by **Electric Motors & Specialties, Inc.**, 400 King St., Garrett, Ind.

▲ For more details circle **NED-447 F5** on enclosed inquiry slip ▲

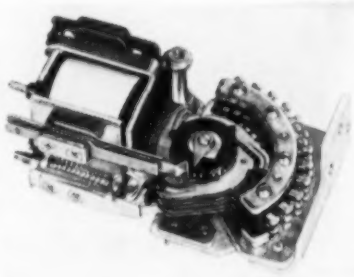
REMOVABLE VISE JAWS
made of Tenite II plastic



Compounded of Tenite II plastic, No-Mar removable vise jaws will not "transfer" regardless of rough usage. Jaws are merely slipped into vise and hold rigidly in place by means of spring-steel clips. They are made in seven sizes from 2½ to 6 in. wide by **Hunter Tool Co.**, 6606 S. Gretna Ave., Whittier, Calif.

▲ For more details circle **NED-448 F5** on enclosed inquiry slip ▲

STEPPING SWITCH
rotary unit is spring driven



Usable as either an 11-point or a 10-point switch, type 11 Springdriven stepping switch is capable of millions of operations without adjustment. It can be employed for selecting any desired point in a series, selecting the first unoccupied point in a series, sequence controlling, counting and totalizing, generating timed impulses and monitoring. Switch can be provided with from one to eight bank levels of 10 or 11 points each. Each bank level is traversed by a pair of wiper springs. Rotor is driven by a stainless steel ratchet wheel having 33 teeth. Wipers can be arranged so that several bank levels can be used independently or in tandem. Made by **C. P. Clare & Co.**, 3101 Pratt Blvd., Chicago 45, Ill.

▲ For more details circle **NED-449 F5** on enclosed inquiry slip ▲

23 APEX universal assemblies helped solve this design problem

The close centers on the vertically-adjustable rollers of this special leveling machine posed a major design problem: getting maximum joint strength into a very limited area. The problem was solved by using 23 Apex universal joint assemblies. The unique and exclusive structural design of the Apex universal joint offered the most favorable strength-size ratio.

Apex quick-change universal joint assemblies provide still another advantage on this application: there are no pins used at either end of an assembly, where working space is restricted. Instead, adjustment, removal or replacement of any assembly is made through the Apex quick-change arrangement at the center of the assembly.

your design problem

may be even more complex, but the solution can be just as simple. First step in solving your problem: write, on your company letterhead please, for Catalog 27 and Application Data Sheets. You'll find both are interesting and very helpful.

APEX universal joints

THE APEX MACHINE & TOOL CO.
1046 Patterson Blvd. • Dayton 2, Ohio

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Here, in 28 pages, fully illustrated, J-M tells you how you can improve performance and cut costs with more effective sealing, longer lasting Clipper Seals.

There are detailed descriptions of all standard and special seals. Uses in various industries are covered thoroughly with documented case histories. Full use is made of every type of illustration.

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Johns-Manville CLIPPER SEALS

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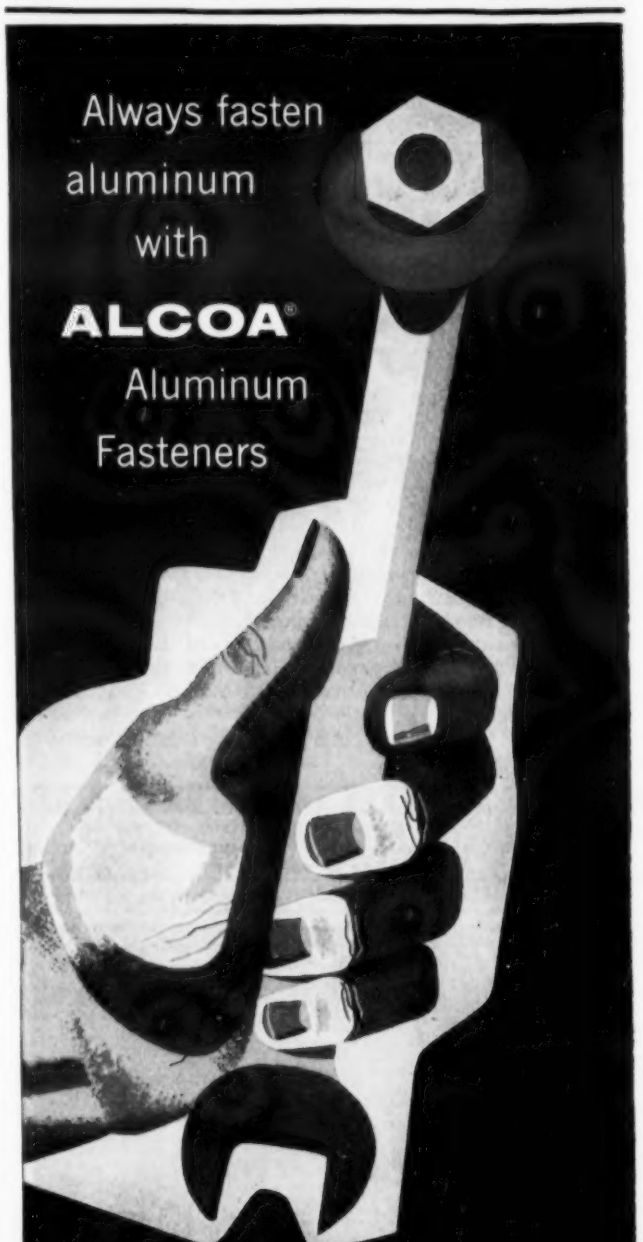
Always fasten aluminum with **ALCOA®** Aluminum Fasteners



available at your local ALCOA distributor – fill out coupon for complete application and specification data...

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Gentlemen: Please send complete specification data and samples of your aluminum fasteners.

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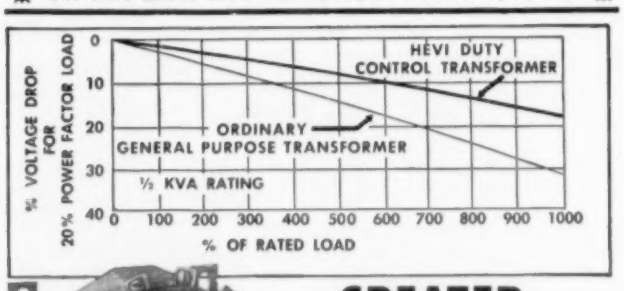
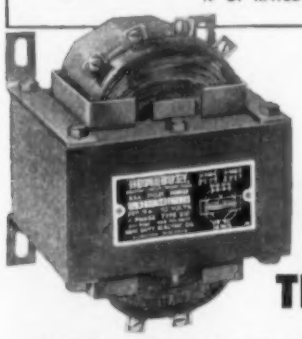
168 Sixth Street Connellsville, Pa.
GARDENA, CALIF. • FARNHAM, QUE. • LONDON, ENG.

For more details circle NED-453 F5 on enclosed inquiry slip





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This chart shows the marked difference between inrush current handled by a Hevi Duty Transformer with interleaved winding and ordinary transformers. This difference ranges from 30 to 80 percent depending on size and design of transformer. Often, this means you can use a smaller transformer, saving both panel space and cost.

Ask for Bulletin T-5111 for complete data on units from 25 VA to 10 KVA.

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HEAT TREATING FURNACES HEVI-DUTY ELECTRIC EXCLUSIVELY
DRY TYPE TRANSFORMERS — CONSTANT CURRENT REGULATORS
MILWAUKEE 1, WISCONSIN

For more details circle NED-454 F5 on enclosed inquiry slip

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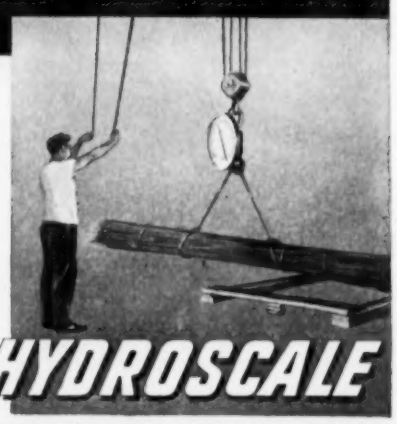
weigh it as you receive it



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Hydroway Scales, Inc. Department 46
20618 West Eight Mile Road Detroit 19, Michigan

For more details circle NED-455 F5 on enclosed inquiry slip

ELECTRONIC CONTROL
relay type unit designed for high current laboratory uses

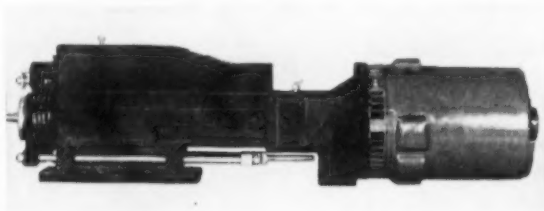
High current units such as incandescent lamps, heating elements and solenoids can be controlled by the Superelay, an electronic laboratory control device. Laboratory applications include maintenance of constant temperature, pressure and water level control and direct phototube operation from control and counting operations. Unit is fail-safe and capable of switching steady current loads as high as 15 amp with less than 5 microamperes passing through the contacts of the sensing device.

Contactor or photocell input can be employed for either forward or reverse operation. Dual input strip permits relay operation with either normally-open or normally-closed sensing elements and outlets. An additional alternating current outlet, sensitivity control and series-connected outlet are incorporated. Use of a direct current control circuit provides for operation with very long input leads and allows incorporation of external time delay circuits. Offered by **Chicago Apparatus Co.**, 1735 N. Ashland Ave., Chicago 22, Ill.

For more details circle NED-456 F5 on enclosed inquiry slip

DIRECT-SPINDLE TAPPER
traverse adjustable from 0 to 3 in.

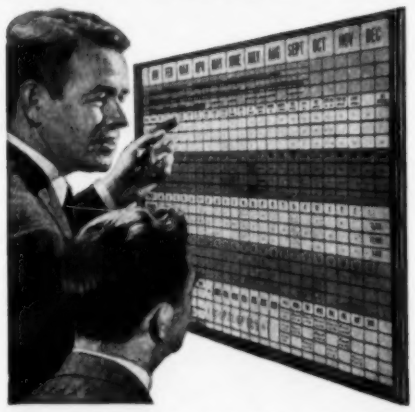
Rapid air-powered approach and smooth hydraulic feed through the work at any preset rate desired are features of the Bellows-Locke model DT-5E di-



rect-spindle tapping unit. Unit consists of a model 5-E drill unit with in-line mounted G-E high-slip motor for 220/440-v, three-phase operation. Standard shaft speed is 1140 rpm, with other speeds available. Tapper is furnished with magnetic motor-reversing contactor, line overload protection, control transformer and terminal strip. Spindle traverse is adjustable from 0 to 3 in. and thrust is about three times applied air pressure. Tap sizes can range up to 5/16-in.-18 or 3/8-in.-24 in mild steel. Unit is capable of continuous duty at rates up to 60 reversals per minute. Made by **Bellows Co.**, 230 W. Market St., Akron 9, O.

For more details circle NED-457 F5 on enclosed inquiry slip

GRAPHIC VISUAL CONTROL



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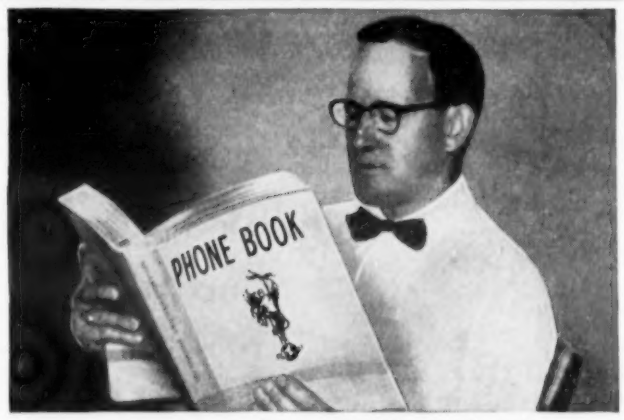
ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS
SQUARE D COMPANY

For more details circle NED-459 F5 on enclosed inquiry slip



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For more details circle NED-461 F5 on enclosed inquiry slip

PUZZLED by a dust problem?

PANGBORN CAN SOLVE IT FOR YOU!

Pangborn Unit Dust Collectors give thorough, efficient dust control at any individual operation. Requiring little floor space, they can be located anywhere. Use the Pangborn Dust Collector to:

- **Reclaim valuable material**
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Investigate Pangborn Unit Dust Collectors now! Shipped assembled . . . $545 and up. For details, write: Pangborn Corp., 2400 Pangborn Blvd., Hagerstown, Md. *Manufacturers of Dust Control and Blast Cleaning Equipment.*

Pangborn CONTROLS DUST

For more details circle **NED-462 F5** on enclosed inquiry slip

. . . make every step a safe step

BLAW-KNOX ELECTROFORGED® STEEL GRATING and STAIR TREADS

Indoors or outdoors, you can provide safe walking conditions throughout your plant on floors, stair treads, platforms, walkways and catwalks. For Blaw-Knox Electroforged Steel Grating brings you these exclusive features:

1. rigid one-piece construction—easy to install
2. non-slip twisted crossbar—for safe footing
3. three types of bearing bars
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5. all surfaces accessible—easy to paint
6. maximum open area—for light and ventilation

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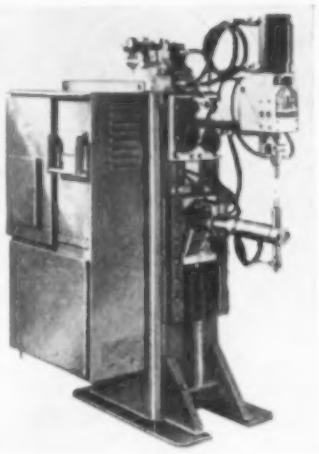
BLAW-KNOX COMPANY
BLAW-KNOX EQUIPMENT DIVISION
Pittsburgh 38, Pennsylvania

GRATING APPLICATIONS: floors • platforms • walkways • catwalks • stair treads • fan guards • shelving • and many other uses, both outdoors and indoors, for versatile steel grating.

For more details circle **NED-463 F5** on enclosed inquiry slip

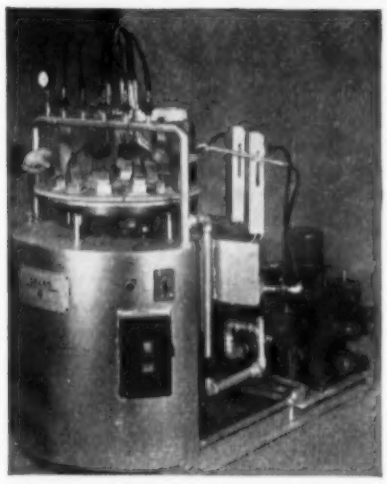
SPOT WELDING MACHINE is high production, heavy duty unit



Designed for high duty cycle resistance welding of medium-gage sheet metals, this spot welding machine has air cylinder of sufficient capacity to handle a wide range of thicknesses. Smooth head travel, minimum friction and inertia qualities result from hardened and ground lubricated slide riding on adjustable V-gibs. Lower arm is adjustable vertically from 13 in. between arms in a closed position to 23 in. in an open position. Lower arm is readily adjustable in a horizontal plane from standard throat depth of 18 in. to within 9 in. of the machine face. Variety of electrode arrangements is possible. Made by **Delta Welder Corp.**, Equipment Div., 8525 Livernois, Detroit 4, Mich.

For more details circle **NED-464 F5** on enclosed inquiry slip

PACKAGED BRAZING UNIT uses precise combustion control to braze up to 500 assemblies per hour



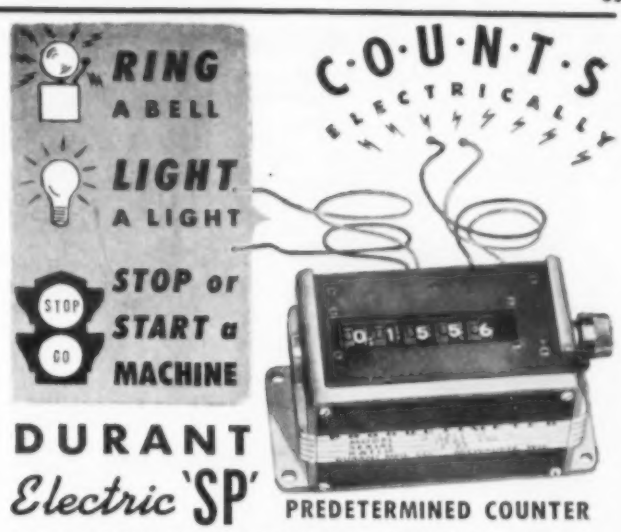
Simple joints in small and medium size parts or assemblies can be brazed by an unskilled operator at rates as high as 500 assemblies per hour on this self-contained, gas-fired packaged brazing unit. All equipment is rigidly mounted on integral structural steel frame and includes combustion controller to deliver proper fuel/air mixture, adjustable burners, fixtures to support work, and all necessary automatic timers, pneumatic indexers and motors. Dial-type work table carries assembly past burners in continuous or intermittent motion.

Provision can be made for specialized functions, such as automatic feed and delivery, and air or water-controlled cooling. Each machine is engineered to meet range of jobs as specified. Machine shown employs indexing action past Superheat burners to braze burner and similar assemblies. Made by **Selas Corp. of America,** D St. & Erie Ave., Philadelphia 34, Pa.

For more details circle **NED-465 F5** on enclosed inquiry slip

Export Dept.: Bessemer Bldg., Pittsburgh, Pa.

For more details circle **NED-466 F5** on enclosed inquiry slip



DURANT Electric 'SP' PREDETERMINED COUNTER

(COUNTS ELECTRICALLY and CLOSES SWITCH AT END OF PRE-SET COUNT)

Eliminates costly over-runs or time consuming under-runs. Actuated by Photo Electric Cell, Tube, Relay, or Contact Switch. Counter can be located where desired. Predetermined count may be set at any figure to 99,999. Hundreds of applications in all phases of production and instrument work.

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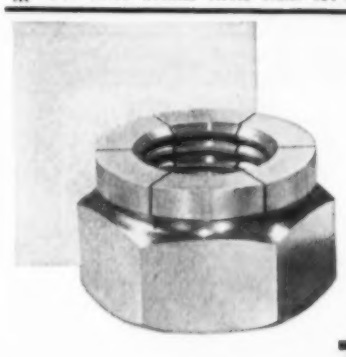

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- resilient locking segments
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FLEXLOC LOCKNUT DIVISION **SPS** JENKINTOWN PENNSYLVANIA

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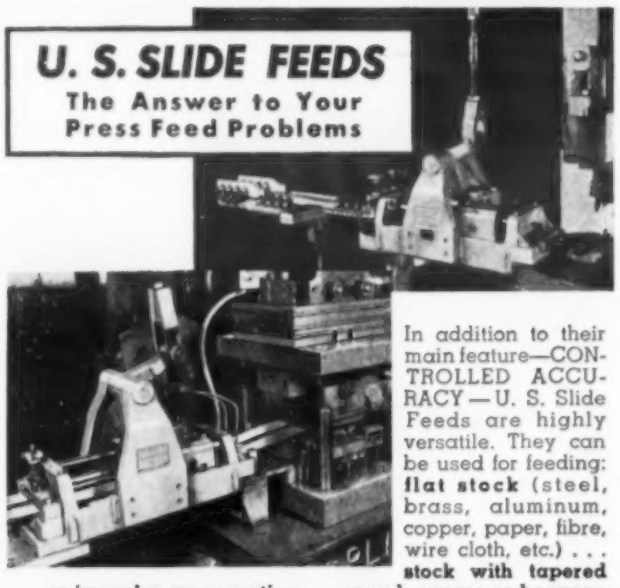
U. S. SLIDE FEEDS
The Answer to Your Press Feed Problems



In addition to their main feature—CONTROLLED ACCURACY—U. S. Slide Feeds are highly versatile. They can be used for feeding: **flat stock** (steel, brass, aluminum, copper, paper, fibre, wire cloth, etc.) . . . **stock with tapered or irregular cross section . . . round, square or hexagon shaped wire.** They can also be used, as shown in the photos above, to feed **two strips at a time,** thus greatly increasing production.

For descriptions of U. S. Slide Feeds, Roll Feeds, Straighteners, Stock Reels and Coil Cradles, ask for a copy of Bulletin 80-N.

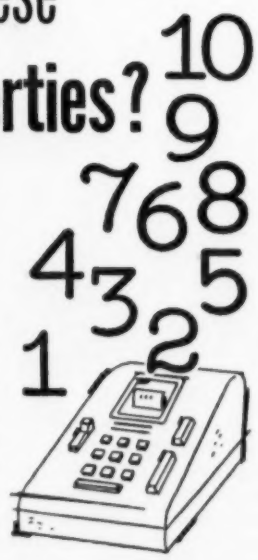
U.S. TOOL COMPANY, Inc.
AMPERE (East Orange) NEW JERSEY

Builders of U. S. Multi-Slides — U. S. Multi-Millers
U. S. Automatic Press Room Equipment — U. S. Die Sets and Accessories

For more details circle NED-470 F5 on enclosed inquiry slip

For more details circle NED-471 F5 on enclosed inquiry slip

can you use these multiple properties?



Synthane laminated plastics make good on many different jobs because they deliver many properties in combination. *Synthane* is strong, tough, light in weight, dimensionally stable, machinable, chemically resistant, electrically strong, and heat resistant. Many different grades of *Synthane* sheets, rods and tubes are available, also molded-laminated and molded-macerated parts and complete fabricating service for one part or millions. Send the coupon for full details.

SYNTHANE
SYNTHANE CORPORATION
N.E. River Road, Oaks, Pennsylvania

Please send me a copy of the *Synthane* catalog.

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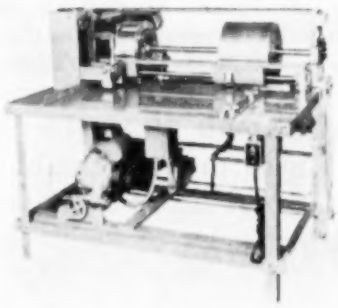
For more details circle NED-472 F5 on enclosed inquiry slip

FLOW VOLUME CONTROL
delivers set rate of fluid flow

Regardless of variable inlet pressures, this Mesurflo flow volume control will deliver a set rate of fluid flow. One flow rate is assured as flow is regulated in direct proportion to inlet pressures exerted against diaphragm. Any one rate of flow from 1/5 to 2 gpm, ¾ to 6 gpm and from 1½ to 8 gpm is delivered by ¼, ⅜ and ½-in. pipe sizes, respectively. Rates for hot or cold water are held to ±10 per cent from 10 to 150 psi. Made by **Hays Mfg. Co.,** Dept. 233, W. Twelfth St., Erie, Pa.

For more details circle NED-473 F5 on enclosed inquiry slip

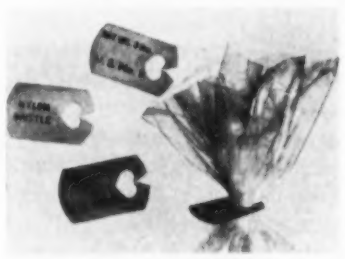
PACKAGE PRINTER
up to 3000 impressions per hour



Production line marking and coding of multiwall bags and shipping containers is facilitated by the improved Autoprinter. Now completely automatic in operation, its speed has been increased up to a rate of 3000 impressions per hour. All possibility of offsetting has been eliminated. Solenoid controlled starting and magnetic braking contribute to smooth operation. Made by **Industrial Marking Equipment Co.,** Dept. NED, 454 Baltic Ave., Brooklyn 17, N. Y.

For more details circle NED-474 F5 on enclosed inquiry slip

PLASTIC BAG CLOSURES
also serve to identify products

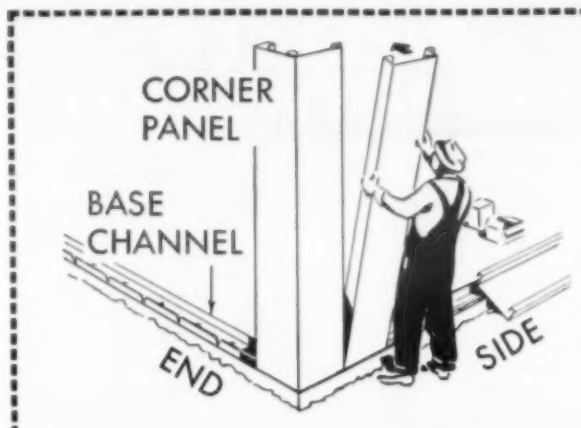


Available in various colors, preprinted Kwik Lok bag closures can also be utilized to identify bags' contents. Need for inserts, or inventory of bags preprinted with variable copy is eliminated. Bags can be closed and labeled rapidly either by hand, or by use of small, semiautomatic bag closing machines. Pointed jaws of closures press themselves harmlessly into bag neck to provide a lock that will resist rough handling. Free samples available from **Kwik Lok Corp.,** P. O. Box 2098L, Yakima, Wash.

For more details circle NED-475 F5 on enclosed inquiry slip

ARMSTRONG-BRAY
GEAR and WHEEL PULLERS

For more details circle NED-476 F5 on enclosed inquiry slip



ARMCO BUILDINGS GO UP FAST

Whatever your space requirements—you can get a standard Armco Steel Building that meets your needs in a hurry. Interlocking STEELOX Panels simply snap together to provide both structural support and finished exterior. You save the time and trouble of framework, rafters, sheathing and roofing.

First cost is low, and there's little or no maintenance; nothing to crack, warp, or rot. Armco Drainage & Metal Products, Inc., 4375 Curtis Street, Middletown, Ohio.

WRITE FOR COST-SAVING DETAILS

ARMCO STEEL BUILDINGS ARMCO

For more details circle NED-477 F5 on enclosed inquiry slip

For more details circle NED-478 F5 on enclosed inquiry slip

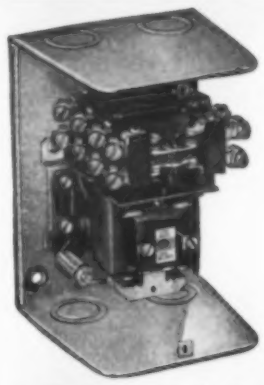
A simple, rapid change-over converts the Roller cutter into a 4-wheel cutter for ditch work or similar restricted-area cutting.

Whether in the Roller, 3-wheel or 4-wheel models these new Reed cutters are the easiest and cleanest cutting tools in their size range. In the Roller model, the cutting wheel is in the block where it is always in full sight for lining up with a cut-off mark on the pipe. The 4-wheel model is excellent for close quarters since it operates with an easy, ratchet-like action through one-fourth of a revolution. Pipe or conduit capacity up to 2 inches. Reed Razor Blade wheels cut easier, leave minimum burr.

Ask your supplier or write for free literature.

REED MANUFACTURING COMPANY
ERIE • PENNSYLVANIA • U. S. A.

For more details circle NED-479 F5 on enclosed inquiry slip



BULLETIN 700 UNIVERSAL RELAYS

Available in one to 8 poles in a wide variety of enclosures for any service condition. Rated up to 10 amperes at voltages up to 600 v.

The Sign of QUALITY Motor Control

Allen-Bradley Bulletin 700 universal a-c relays are a handy development in relay design. They have a double bank of normally open and normally closed contacts, which makes it possible to change one or more circuits from normally open to normally closed contacts, or vice versa, merely by changing connections from one set of terminals to the other.

These relays are good for millions of trouble free operations. Latch-type, hum-free relays are also listed in the Bulletin 700 line. For further information, please write for Bulletin 700 today.

Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wis.
In Canada—Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY QUALITY MOTOR CONTROL

For more details circle NED-480 F5 on enclosed inquiry slip

Remove Oily and Greasy Dirt Faster with New Brulin Brulinsolv

A Concentrated Solvent Emulsion Cleaner

- **Brulinsolv is faster-acting**—Cleaning time can be cut when mixed with low cost solvents.
- **Brulinsolv is economical**—Supplied as a concentrate, a little goes a long way.

and NOW . . .

- Brulinsolv has a pleasant odor—that your operators, mechanics and customers will appreciate.

Write today for more information.

BRULIN & COMPANY, INC.
2944 Columbia Avenue • Indianapolis 7, Indiana
1794 12th Street • Oakland 7, California

For more details circle NED-481 F5 on enclosed inquiry slip

Keep your eye on Buckeye

and this ALL-NEW power-packed grinder—weighs just 4½ lbs.!

You'll look a long while before you'll find a grinding job that can't be handled by one of these NEW Buckeye horizontal grinders! Plenty of power to handle a 6" wheel on heavy work . . . can be used with roll-type abrasives or wire brush, and will do a top-notch job with either . . . can even be used with a tool post holder for accurate work.

Catalog G-10 has the full story on these all-new Buckeye grinders, plus complete information on the most complete line of portable, air-powered abrasive tools available anywhere. Write—today—for your copy.

Buckeye Tools CORPORATION
DIVISION 34 • DAYTON 1, OHIO
IN CANADA: Joy Manufacturing Co., Ltd., Galt, Ontario

producers of the world's first successful rotary air tools

For more details circle NED-482 F5 on enclosed inquiry slip

CENTRALIZED LUBRICATION SYSTEM for production machinery bearings

This high pressure centralized system for lubricating machinery bearings incorporates manually - operated pumping unit and 15-lb capacity reservoir for grease or oil. Few strokes of pump handle forces lubricant under 2500 - psi pressure through single line circuit of injectors, or adjustable force-feed measuring valves, one for each bearing. Injectors or valves deliver measured quantity of lubricant to each bearing every time system is cycled. Indicator shows when cycle is complete. Release of pump handle automatically vents and recharges system. Reservoir can be refilled from bucket pump or hand packed. Made by **Lincoln Engineering Co.**, Industrial Div., 5782 Natural Bridge Ave., St. Louis 20, Mo.

For more details circle NED-483 F5 on enclosed inquiry slip

INDICATOR TEST SETS check to 0.001, 0.0005 or 0.0001-in.

One Geneva dial indicator with a universal back and variety of attachments comprise these precision test sets for machinists, tool makers and inspection departments. Indicators are offered in 125F, 135F and 145F series, respectively graduated in 0.001, 0.0005 and 0.0001-in. Set includes 6 x ¾ x ⅜-in. tool post holder threaded to take 9-in. upright spindle. Universal holding sleeve for spindle and shank allows positioning of indicator in any vertical or horizontal position. For checking operations on milling arbors, lathes or planer tools, a 1⅜-in. capacity clamp with its own upright spindle is provided. All parts are packed in a gray finished metal box. Made by **Chicago Dial Indicator Co.**, Dept. F, 180 N. Wacker Dr., Chicago 6, Ill.

For more details circle NED-484 F5 on enclosed inquiry slip

Crane Scales

Baldwin-Lima-Hamilton Corp.—Crane scales for electrically weighing by SR-4 load cells are descriptively covered in 12-page illustrated bulletin 4304. Seven standard models are offered with rated capacities of ½, 1¼, 2½, 5, 12½, 25 and 50 tons. Special scales of larger size, instrumentation, accessories and applications are described as well.

For more details circle NED-485 F5 on enclosed inquiry slip

JIB CRANES

There are eight *standard* models in the Abell-Howe jib crane line. No doubt you'll find one for your requirement—and you save because it's *standard* with Abell-Howe.

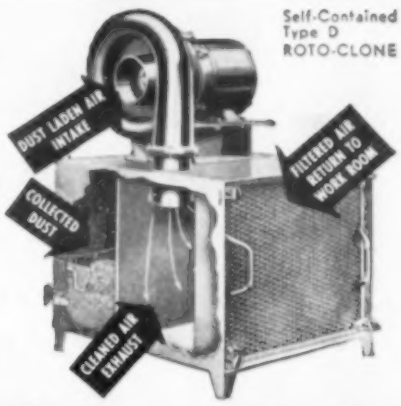
All eight types are pictured and described in new catalog. Write for it today.

ASK FOR CATALOG C-132.

ABELL-HOWE COMPANY
53 W. JACKSON BLVD.
CHICAGO 4, ILLINOIS

For more details circle NED-486 F5 on enclosed inquiry slip

CLEANS UP Isolated Dust Sources Completely-Economically



Every shop has them—isolated dust sources, such as tool and stand grinders, that don't justify the cost of a central dust control system. For such applications, the Self-Contained Type D ROTO-CLONE offers the practical solution.

Here is a compact, high efficiency unit which exhausts and separates the dust; stores the collected material for easy disposal and filters the air before returning it to the workroom. Requires little space; minimum of duct work. For complete product information, call your local AAF representative or write us direct.

AAF American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

For more details circle NED-487 F5 on enclosed inquiry slip

NEW CUTLER-HAMMER 9101 TWO-POLE MOTOR SWITCH

Better Control and Protection for All Motors up to 1 HP

Check these features and know the difference: Twin-break solid silver contacts; quick make and quick break. All mechanical operating parts are stainless steel. Famous Cutler-Hammer Eutectic Type thermal overload protection. Free-tripping; contacts cannot be held closed. Resets when switch is thrown to off position. Motor load sensing coils are fully enclosed but front removable; available for 10% loading increments.

Easiest to install and wire; removing wrap-around cover exposes mechanism completely, at front and both sides. Cover secured by single self-retained screw which cannot drop out and become lost. No annoying loose insulating baffle. Straight-through wiring; line terminals at top and load terminals at bottom . . . all clearly marked. Switch mechanism so compact it can be used in ordinary wall switch outlet box with standard toggle switch plate. Ideal for flush mounting on wall, panel or in machine cavity. Your Authorized Cutler-Hammer Distributor stocks both single pole and two-pole models of the new C-H 9101 Motor Switch. Order today and see the difference. CUTLER-HAMMER, Inc., 1377 St. Paul Ave., Milwaukee 1, Wisconsin. Associate: Canadian Cutler-Hammer, Ltd., Toronto.

EASY TO WIRE
Removing wrap-around cover opens switch at front and both sides.

OPEN TYPE 9101
Ideal for flush mounting on wall, on any panel or in a machine cavity.

CUTLER-HAMMER
CUTLER-HAMMER MOTOR CONTROL C-H

For more details circle NED-488 F5 on enclosed inquiry slip

NOW

Pre-Strengthened Sheets!

HAVE AS MUCH AS

108% More Rigidity

70% More Buckling Strength

39% More Impact Resistance

RIGID-tex

THIS IS PATTERN 1-ACC

the Design-Strengthened Metal

40 Striking Designs Available

See SWEETS Design File 1a/Ri or write us for more information.

RIGIDIZED METALS CORPORATION

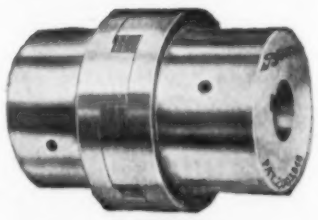
7176 OHIO STREET • BUFFALO 3, N. Y.

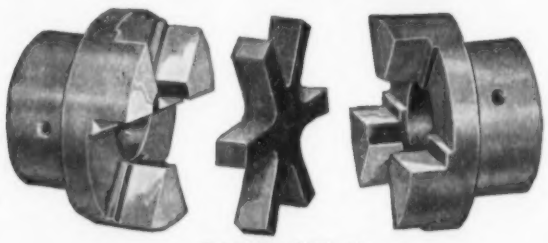
Sales Representatives in Principal Cities

▲ For more details circle NED-489 F5 on enclosed inquiry slip ▲

Specify the Coupling that lives a DOUBLE LIFE...

The BONDTRU Coupling has double life. When the coupling is operating in one direction only, every second arm of the insert carries a load, while the remaining arms serve to prevent backlash. Should the load carrying arms become worn through long use, the insert can be moved up one position, putting in place the other set of arms which have remained unimpaired.





Patent No. 2,003,848
Canadian Patent No. 295,340

BONDTRU

Flexible

INSULATED COUPLING

The BONDTRU Coupling can be adapted with complete satisfaction to practically any application where a flexible connecting medium is required to transmit from 1/4-h.p. up to 100 h.p. at 100 r.p.m.

EASY ON BEARINGS—The self-aligning feature of the BONDTRU Coupling minimizes wear on the bearings by compensating for both lateral and angular misalignment of the driving and driven shafts.

NO MAINTENANCE NEEDED—Another advantage of the BONDTRU is that it has no moving parts—nothing that needs lubrication.

For complete information on Bond Flexible Insulated Couplings, write for Catalog No. F-24.

Carried in stock by
DISTRIBUTORS IN PRINCIPAL CITIES
Consult your local Classified Directory or write to

CHARLES BOND COMPANY
617-23 Arch Street, Philadelphia 6, Pa.

Bond®

STOCK GEARS
SPEED REDUCERS

▲ For more details circle NED-490 F5 on enclosed inquiry slip ▲

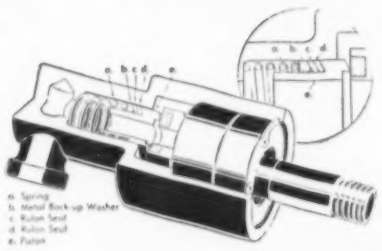
BARREL HANDLING TRUCK
drum latched in place automatically

No tipping or pick-up space is required by this model 600 barrel cart when handling barrels or drums which touch each other. Automatic spring-actuated bar allows a hook to slip over the barrel edge as the truck is moved against it. Design of loading shoes facilitates both tipping and unloading of heaviest barrels. Truck is suitable for handling liquid containers as well as barrels and drums containing scrap, castings or other parts. Kick stand allows truck to stand in vertical position when not in use. Rubber-tired roller-bearing wheels roll easily. Made by **Valley Craft Products, Inc.**, 582 Jefferson Ave., Lake City, Minn.

▲ For more details circle NED-491 F5 on enclosed inquiry slip ▲

ROTARY JOINT
withstands high temperatures

Sealing under a range of temperatures up to 550° F is possible with the Anco improved low pressure rotary joint. Redesigned piston and piston seal with increased sealing contact surfaces make high temperature use possible. Formed shape of Rulon, a low friction bearing material, is fitted to the piston and maintained under pressure by the sealing spring and line pressure. Balanced piston makes use of line pressure to control unnecessarily high pressure against rotating sealing surfaces. Joint has self-adjusting wear take-up and is leakproof hot or cold. Made by **American Associates, Inc.**, Anco Div., Dept. NE, 1 Baker St., Providence 5, R. I.



▲ For more details circle NED-492 F5 on enclosed inquiry slip ▲

CORRECTION

In the description of the Cosmo-Trol adjustable speed control for operating direct current motors on single and three-phase alternating current in the April issue, it was erroneously stated that these units were rated for 1.10 to 29 hp. They actually are available for direct current motors ranging in size from 1/10 to 29 hp. They are made by **Cosmo Engineering Laboratories, Inc.**, Dept. NE 1, P. O. Box 348, Hackettstown, N. J.

▲ For more details circle NED-493 F5 on enclosed inquiry slip ▲

New BATTERY LIFE TESTER

This new battery life tester permits you to test batteries under standardized, automatically controlled constant current conditions never before attained. Constant current specifications are maintained within an accuracy of two percent of full scale for shunt used. This high accuracy is obtained throughout testing by use of a servo-control unit that automatically adjusts the rheostat. The servo-control is designed as a separate unit that can be incorporated in your present equipment if desired. Depending on the size and type of rheostat used and on the charging current supply, batteries of various voltages may be tested individually or in series.

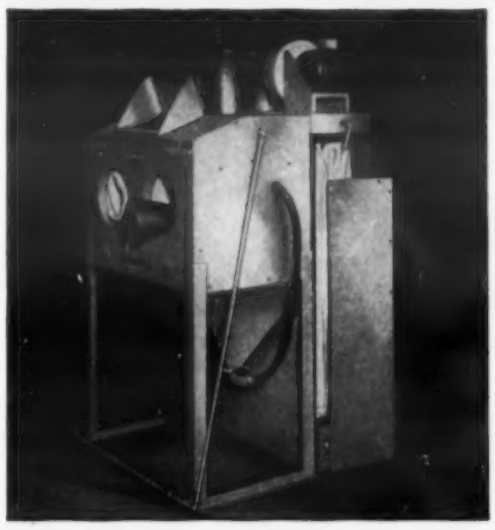
4514

CONTROL ENGINEERING CO.
8921 ALPINE AVENUE • DETROIT 4, MICHIGAN

Electrical Engineers and Manufacturers

Subsidiary of: JERVIS B. WEBB CO.

▲ For more details circle NED-494 F5 on enclosed inquiry slip ▲



HANDY BLAST CLEANING CABINET

Here is a cabinet of many applications. Designed for tool room use, deburring, removing rust and scale, producing matte' finishes, cleaning heat-treat scale. Also used for removal of carbon deposits when used with soft grit abrasives. Many laboratories use this equipment for experimental work, samples, testing, etc. Furnished complete with dust filter, fan and 1/4 HP motor. Sanitary. Compact.

Write for Bulletin No. 41

RUEMELIN MFG. CO.
3883 N. PALMER STREET MILWAUKEE 12, WIS., U. S. A.
MANUFACTURERS AND ENGINEERS — SAND BLAST AND DUST COLLECTING EQUIPMENT — WELDING FUME COLLECTORS

A 7830-1/4

▲ For more details circle NED-495 F5 on enclosed inquiry slip ▲

Send for your FREE SAMPLE today!

The Perfect Sealer for Gasket and Pipe Joint Connections on All Lines Carrying Water, Gas, Low-Pressure Steam, etc.

Key-Tite seals positively, yet is easily opened—will not freeze in the joints. Order your free sample now and try it on your next joint sealing job. You'll understand why it has been a favorite for over 30 years among plant maintenance men, heating contractors and others concerned with efficient and fast pipeline assembly.

KEY COMPANY
2601 McCasland • East St. Louis, Illinois

▲ For more details circle NED-496 F5 on enclosed inquiry slip ▲

GREAVES GEARS

1 or 1000 made to your exact specifications

Complete production facilities for spur, helical, bevel and worm gears, worms, pinions and leadscrews—metallic, non-metallic—all sizes.

Greaves is geared for action . . . ready to get your order out right on time. Whether you order one or one thousand gears . . . there's no waiting . . . no worrying about delivery. This means less down time . . . more productive time . . . more profit time. Depend on Greaves for all your gear requirements.

WRITE OR WIRE US FOR ESTIMATE

GREAVES MACHINE TOOL CO.
2302 EASTERN AVENUE CINCINNATI 2, OHIO

▲ For more details circle NED-497 F5 on enclosed inquiry slip ▲

NEW

WORKBENCH TOP ... Resinwood®

ShopTop 30%

"HARDER THAN MAPLE"

For All Industries

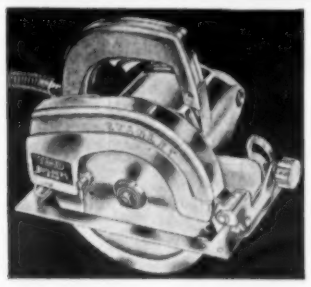
TOUGH
WARP-FREE
SPLINTER-PROOF

ShopTop quality is superior to maple—with up to 50% greater economy. Select kiln dried cores, bonded under pressure and heat, provide a built-in impact cushion to give longer life. Smooth Resinwood facings resist acid, alkali, oil, and grease. For new or replacement work benches.

Made in a wide range of stock sizes. Available through selected industrial distributors in principal cities or write direct for sample and complete information.

RIMCO — ROCK ISLAND MILLWORK COMPANY
RESINWOOD DIVISION
Established 1868 Rock Island 4, Illinois

For more details circle NED-498 F5 on enclosed inquiry slip



A NEW STANLEY® HEAVY DUTY BUILDERS SAW

THE W70 $79.50

Here's a new Stanley builders saw that *cuts 2 x 4's at 45°* and only weighs 12 lbs. Its 7" blade takes a deep 2⅜" bite at 90° and bevels at any angle up to 45°. Furnished with metal carrying case.

CHECK THESE OUTSTANDING STANLEY FEATURES:

1. Patented Stanley "Motor-Saver" protects motor from shock loads.
2. Cutaway window lets you see what you're cutting.
3. An automatic telescoping safety guard with convenient finger knob control.

See this new Stanley Saw. Try the heft of it. Cut with it. Your Stanley distributor has it now. For further information write Stanley Electric Tools, 586 Myrtle Street, New Britain, Conn.

STANLEY® Electric Tools
A Division of The Stanley Works

TOOLS • HARDWARE • STEEL • STEEL STRAPPING

For more details circle NED-499 F5 on enclosed inquiry slip

Over 13,000,000 shipped to satisfied customers!

The four basic types in our stock solenoid line offer you twelve sets of electro-mechanical characteristics. More than likely, your application will fall within this range. At the same time, you enjoy all the price benefits of large run production.

For complete information write for Bulletin CF-124. It contains drawings, power curves, application limitations and other technical data.

SORENG PRODUCTS CORPORATION
9577 Soreng Avenue, Schiller Park, Illinois
Plants: Schiller Park, Illinois • Spring Valley, Illinois • Fremont, Ohio

For more details circle NED-500 F5 on enclosed inquiry slip

POWER ROOF VENTILATOR
two types available with capacities up to 37,600 cfm

Two types in line of power roof ventilators provide a wide selection to meet specific requirements. Type RVS meets low air volume requirements in ventilating small areas or separate rooms. It features quiet operation and can be used with or without ducting. Of all aluminum construction with centrifugal type fan wheel, this fan has square base for curb mounting, direct-connected fan which is sealed from the air stream and automatic back draft damper.

Type SB of upblast design is a high capacity, high speed unit for industrial applications where noise level restrictions are not critical. Butterfly dampers open automatically when the fan is started and close by gravity to form a weather-tight seal. Hood and damper are galvanized steel. Sizes range up to 37,600 cfm. Made by **Ilg Electric Ventilating Co.**, 2854 N. Pulaski Rd., Chicago 41, Ill.

For more details circle NED-501 F5 on enclosed inquiry slip

BATTERY-POWERED TRUCK
travels 40 miles without recharging

This electrically driven No. 731 "truckster" can transport two passengers and loads up to ¼-ton in industrial plants, warehouses, shipyards and docks, storage yards and air fields. Unit has all steel body, single steering wheel in front and two differentially - operated wheels in rear driven by heavy duty wedge belts. It is powered with four 165-amp automotive batteries and 1¼-hp traction type motor. Truck will travel up to 40 miles without recharging. It also has two speeds forward (5 and 11 mph) and one reverse, 99-in. turning width, two-wheel mechanical brakes, coil spring suspension, pneumatic tires and 5-cu ft carrier space. Accessories include battery charger and cable, tail and headlights, and an electric horn. Made by **Cushman Motor Works, Inc.**, 980 N. 21st St., Lincoln 1, Nebr.

For more details circle NED-502 F5 on enclosed inquiry slip

Hundreds of machines available that were designed for special industry applications.

Let us know your problem. We'll be happy to submit recommendation..

If your problem is high speed coating of paint, varnish, glue, latex, etc.—POTDEVIN's sixty years of specialization in coating equipment can quickly help you solve it . . . guaranteeing initial low cost and top efficiency. Illustrated is a topside or underside coating machine for applying resins, varnish, glues, lacquer, etc. to webs or sheets of paper up to 21"

POTDEVIN MACHINE CO.
273 North Street • Teterboro, N. J.
Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling.

For more details circle NED-503 F5 on enclosed inquiry slip

on "Fischer Turned" BRASS AND ALUMINUM NUTS

New 20-page catalog illustrates, describes and gives specifications for Fischer's extensive line of brass and aluminum nuts. It also tells how "specials" are produced quickly and economically . . . many so regularly that they're virtually "standards" at Fischer.

In addition, catalog describes how 50 years of production "know-how" and special high-speed machinery make precision *turned* nuts available at prices competitive with those produced by other methods . . . cut normal delivery time to absolute minimum.

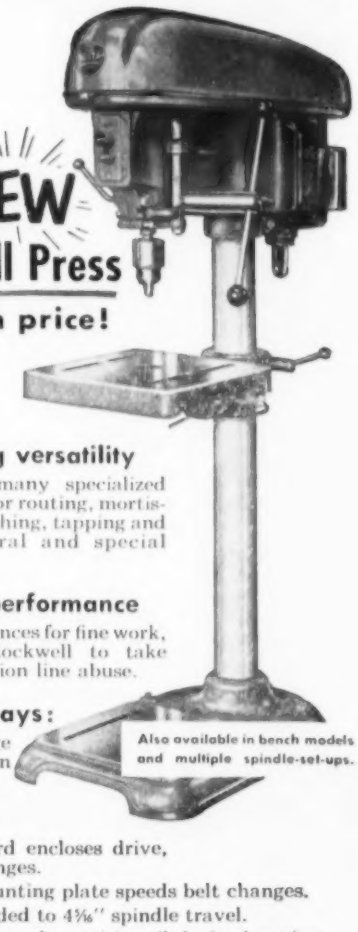
Write today for this new catalog.

Fischer SPECIAL MFG. CO.
461 Morgan Street • Cincinnati 6, Ohio

C-217-FS

For more details circle NED-504 F5 on enclosed inquiry slip

NOW! a completely NEW DELTA 14" Drill Press at no increase in price!



NEW in cost-cutting versatility
Does work of many specialized machines; ideal for routing, mortising, shaping, finishing, tapping and dozens of general and special operations.

NEW in precision performance
Holds close tolerances for fine work, yet built by Rockwell to take toughest production line abuse.

NEW in all these ways:
- New quick-set depth gage gives direct penetration readings.
- New self-locking depth stop calibrated to .002".
- New standard belt guard encloses drive, swings up for speed changes.
- New pivoting motor mounting plate speeds belt changes.
- New capacity . . . expanded to 4⅝" spindle travel.
- New table with tilt angle scale, positive tilt lock, clamping ledges.

NEW IN EVERYTHING BUT PRICE!

DELTA 14" floor, bench and multiple spindle models are all new—all better than ever—yet your Delta Dealer has them at no increase in price!

SEE THEM NOW! A ten minute demonstration tells more than ten thousand words. Let your Delta Dealer demonstrate the biggest value in drill press history!

DELTA QUALITY POWER TOOLS
Another Product by Rockwell

DELTA QUALITY COSTS NO MORE

Send This Coupon for All The Facts!

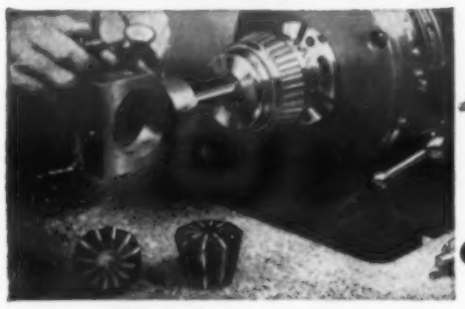
Delta Power Tool Division, Rockwell Manufacturing Company
626F North Lexington Avenue, Pittsburgh 8, Pa.

☐ Please send catalog on New Delta 14" Drill Press line.
☐ Please send name of my nearest Delta Dealer who has the new 14" Drill Press on display.

Name _____ Title _____
Company _____
Address _____
City _____ County _____ State _____

For more details circle NED-505 F5 on enclosed inquiry slip

HERE'S A TYPICAL HOLDING JOB



Jacobs RUBBER-FLEX COLLETS

HOW MANY MORE DO YOU HAVE?

Here the new Jacobs Model 96 Rubber-Flex Collet Chuck holds a machined part for inspection.

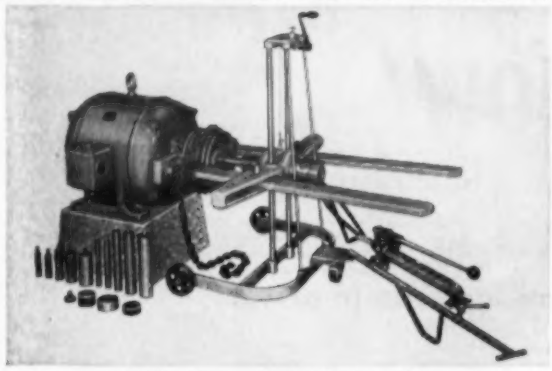
We don't yet know all the applications for this marvelous holding device. We *do* know it is the most accurate collet chuck in the world . . . that it holds any piece from 1/16" to 1 3/8" in diameter using only 11 collets, and has a gripping power unmatched by any split steel collets.

What are your work holding jobs for Model 96? Get the details on this great chuck from your industrial distributor, or write The Jacobs Manufacturing Co., 2406 Jacobs Road, West Hartford 10, Conn. Ask for Bulletin 54-CC.

Jacobs CHUCKS If it's a Jacobs – it holds

▲ For more details circle NED-506 F5 on enclosed inquiry slip ▲

THE QUICK, EASY WAY TO REMOVE AN OBJECT FROM A SHAFT!



This Powerful, Hydraulic

PULLEY PULLER

For Removing Pulleys, Wheels, Gears, Coupling, Sheaves, etc.

One man can do it in minutes — even if objects are stuck fast. No crowbars, sledges, or blowtorches. No damage to equipment. Puller is adjustable — easy to move — rugged. Hundreds being used in industry.

- 5-ton size on wheels $101.75
- 20-ton size on wheels $319.00
- 50-ton size on wheels $720.50

F.O.B. Factory. New Quicklink chain and set of ten ram adaptors as shown, at slight additional cost.

Write for complete information — Catalog E

INDUSTRIAL ENGINEERING EQUIPMENT CO.
122-124 E. 4th St. Davenport, Iowa

▲ For more details circle NED-507 F5 on enclosed inquiry slip ▲

Why this union outperforms ...outlasts...all others

In the 603 Rockwood Unions the male seat is 150 Brinell harder than the female seat. This prevents galling in making up and lengthens service life considerably. *No other union has this hardness-differential.*

Also, these unions are 100% "Rockwoodized" to protect all parts against corrosion. So thorough is this process that it effects actual chemical conversion of the entire surface, including threads. As a result, scratches can't spread rust and the finish can't chip or peel off.

Other advantages: all parts fully interchangeable . . . plug type ball-to-cone design eliminates scratching when making up in tight places . . . both seats of AISI molychrome steel, forged in place and bond-locked under 100M and 400M pound pressure. For complete facts write Rockwood Sprinkler Company 506 Harlow Street, Worcester 5, Mass.

ROCKWOOD

ROCKWOOD SPRINKLER COMPANY

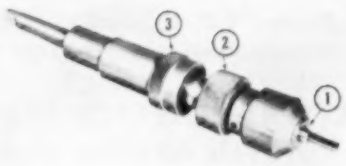
▲ For more details circle NED-508 F5 on enclosed inquiry slip ▲

INTERVAL TIMERS
cover range from 10 sec to 80 hours

Time range of 10 seconds to 80 hours is covered by line of single and multiple circuit interval timers. Line offers three models, ECA-3, ECA-4 and ECA-5, designating the measurement of one timed interval, two intervals and three intervals, respectively. These controls are adaptable to variety of uses, wherever controlled functions can be piloted by direct electrical signal, by solenoid valve or other translating devices. To save in installation costs, units can be supplied wired, ready to operate many and varied programs. Made by **Seely Instrument Co.**, 378 Fourth St., Niagara Falls, N. Y.

▲ For more details circle NED-509 F5 on enclosed inquiry slip ▲

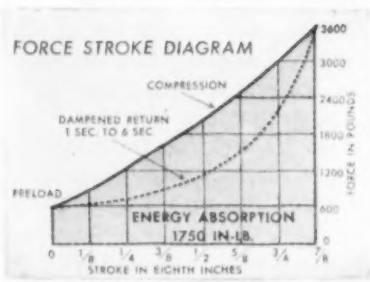
RECESSING & BORING TOOL
makes both cuts simultaneously



Precision, combination recessing and boring tool will make both types of cuts simultaneously. Tool enters work until it comes in contact with antifriction stop (1) on nose of tool. As tool holder continues to feed toward work, body assembly moves forward until adjustable stop nut (3), controlling diameter of recess, comes in contact with boring unit retaining ring (2). This causes eccentric cutter to rotate, producing recess cut of required diameter. Powerful spring in boring unit then compresses, allowing cutting edges to move forward to complete boring operation. Made by **Maxwell Co.**, Dept. 3B, 250 Broadway, Bedford, O.

▲ For more details circle NED-510 F5 on enclosed inquiry slip ▲

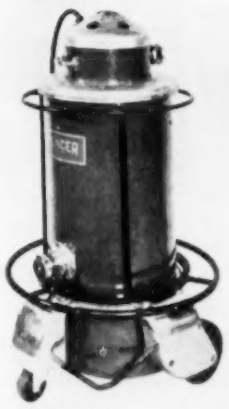
HYDRAULIC SPRING
built-in valve cushions impact



Self-contained dual action Wales Hydra Spring is now available with a built-in valve for dampened return to cushion impact. It has a low - mass piston, provides high frequencies and is 2¾ in. diameter by 4¾ in. long, including a 1-in. stroke. Spring uses compressible liquid called Wales Comproils and produces up to 3600 lb of force in a 1-in. stroke. It is also available with any spring and dampened return force combination. Comproils deliver maximum force at any position, including zero stroke, by built-in preloading and operate at high velocities without natural frequencies. Made by **Wales-Strippit Corp.**, Hydra Spring Div., 363 Payne Ave., North Tonawanda, N. Y.

▲ For more details circle NED-511 F5 on enclosed inquiry slip ▲

PORTABLE VACUUM CLEANER
for commercial and industrial use



Powered by ⅞-hp motor, this low-cost model P118 commercial portable vacuum cleaner is particularly suited for industrial plant use. Air is vented around the motor which can also be supplied in explosion-proof design for use in hazardous locations. Easily removed dirt can and sanitary enclosed dirt bag which is shaken out inside the machine are features. Machine can be used for wet or dry pickup. Where large volumes of water are encountered, a separate galvanized wet tank is available. Machine is supplied complete with hose, heavy duty cord and standard set of cleaning tools. Made by **Spencer Turbine Co.**, 487 New Park Ave., Hartford 6, Conn.

▲ For more details circle NED-512 F5 on enclosed inquiry slip ▲

FOR MANY INDUSTRIAL FILTERING JOBS...

new Honan-Crane Gives You EXTRA HIGH FL

PLUS these time and money saving features

greater filtering efficiency—Designed for in-line installation. Every drop of oil or coolant in the system gets continuous filtration . . . solid particles down to micronic size (1 micron=0.00004 inches) are removed.

large dirt holding capacity—Uses remarkable new "Flo-Pak" Cartridge—a product of two years' research. Cartridge contains [illegible] square feet of filtering surface . . has exceptionally long life.

rugged construction—Built of tank steel for heavy-duty service with a minimum of upkeep. No moving parts. Special cover and cartridge gasket seals eliminate leakage and by-passing.

QUICK OPENING COVERS

Covers are fastened by swing bolts which can be loosened in seconds. Larger models have unique lifting device that swings cover to one side for easy access to refills.

Colorful 8-page Equipment Bulletin 101 gives full details . . . WRITE FOR YOUR COPY TODAY

HOUDAI

405

▲ For more details circle NED-513 F5 on e

Never a stoop, stretch with Work-O-Matic* boxes

EVER consider how many productive hours are lost by the stoop-bend-stretch method and repetitive routine of handling parts-in-process? Well, here's the modern, efficient and economical solution . . . Work-O-Matic drop-bottom boxes combined with Union Metal Positioning Stands. Boxes are quickly, easily positioned for a continuing supply of parts at proper work level. Make sure your file contains case studies revealing the remarkable results with Work-O-Matics.

Write today for illustrated literature on industry's broadest line of Material Handling Equipment. Address The Union Metal Manufacturing Company, Canton 5, Ohio.

From the smallest shop boxes to huge production positioning hoppers.

UNION METAL
Material Handling Equipment

▲ For more details circle NED-514 F5 on e

It's the *installed* bearing that pays off (—or doesn That's where the sound judgment and knowledge of bearin of an *Authorized* SKF Distributor comes in. You can bank on the savings from increased bearing service life and pea operating performance that come from putting . . . *the right bearing in the right place.*

SKF INDUSTRIES, INC., PHILADELPHIA 32, PA., *manufacturers of* SKF *and* HESS-BRIGHT® *bearings.*

▲ For more details circle NED-515 F5 on

an-Crane **Full Flow** FILTER

HIGH FLOW RATES—25 to 800 GPM!

SIZES TO MEET ALL FLOW REQUIREMENTS

The Honan-Crane Full Flow Filter is available in nine compact models using one to 32 "Flo-Pac" Cartridges. Flow rates range from 25 to 800 GPM to provide "custom" filtration in any application.

Filter can be used on virtually any oil or coolant. Completely inert cartridge will not remove additives or inhibitors. Ideal for water soluble solutions . . . will not soften or disintegrate in water.

of Indiana HH

HOUDAILLE-HERSHEY OF INDIANA, INC.
FILTRATION DIVISION

SUBSIDIARY OF HOUDAILLE-HERSHEY CORP.

405 Wabash Avenue, Lebanon, Indiana

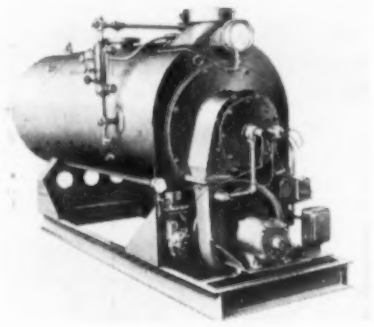
NED-513 F5 on enclosed inquiry slip ▲

REACH-TYPE FORK TRUCK
will handle 3000-lb loads

Heavier carriage and uprights, larger rams and revised power unit are improvements incorporated in this 3000-lb capacity reach-type fork lift truck. All regular features of original 2000-lb model are retained in this heavy duty model. Truck's telescoping upright members are of formed steel, and elevation sections ride on guide rollers having oversized bearings. Unit will operate in 6-ft aisles and handle pallets or skids of varying sizes. Forks extend out to enter pallet and retract for transporting the load. Made by **Raymond Corp.**, 41-132 Madison St., Greene, N. Y.

▲ For more details circle **NED-516 F5** on enclosed inquiry slip ▲

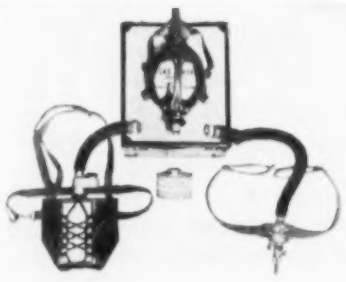
STEAM-HOT WATER GENERATOR
60-hp unit operates on oil, gas



With a few simple adjustments, this boiler, basically a hot-water generator, can be converted to steam operation. Both steam and hot-water phases operate automatically once proper operation is selected. Unit is rated 60 hp and operates on light oil, gas or a combination of the two. As a hot-water generator, it generates 2,010,000 Btu per hour at working pressure of 30 psi. It will deliver 2480 gph of hot water with 100° rise in temperature. As steam generator, unit delivers 2070 lb steam per hour at pressures from 15 to 200 psi, as specified. On change-over from hot water, unit will deliver steam in 5 to 10 minutes. Made by **U. S. Radiator Corp.**, Cyclotherm Div., Dept. NED, Oswego 1, N. Y.

▲ For more details circle **NED-517 F5** on enclosed inquiry slip ▲

GAS MASK KIT
protects against all plant gases



Protection against all plant gas hazards and visible smoke from fires is assured millwrights and maintenance men equipped with this gas mask. Kit provides Full-Vision face piece for dust and smoke protection, a canister mask to protect against gases and smokes and an air-supplied mask which employs plant compressed air for use in any harmful or objectionable atmosphere. Offered by **Acme Protection Equipment Co.**, 1249 Kalamazoo St., South Haven, Mich.

▲ For more details circle **NED-518 F5** on enclosed inquiry slip ▲

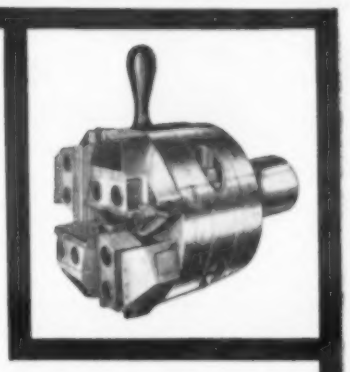
TRANSFER CONVEYOR
handles 1/4 to 1 1/2-in. diameter parts

Capacity for handling parts with 1/4 to 1 1/2-in. diameters is provided by this 62 1/2 in. long transfer conveyor with a frame width of only 1 3/4 in. Conveyor is

intended for transferring parts from one machine to another. Power is furnished by 1/4-hp, three-phase motor and speed adjustments are easily made. Conveyor can be made in other sizes to meet individual needs. Made by **Feedall, Inc.**, Dept. ND, 38399 Pelton Rd., Willoughby, O.

▲ For more details circle **NED-519 F5** on enclosed inquiry slip ▲

For Economy Threading on Turret Lathes



LANDMATIC Heat-Treated Die Heads are stationary heads designed for production threading to commercial tolerances:

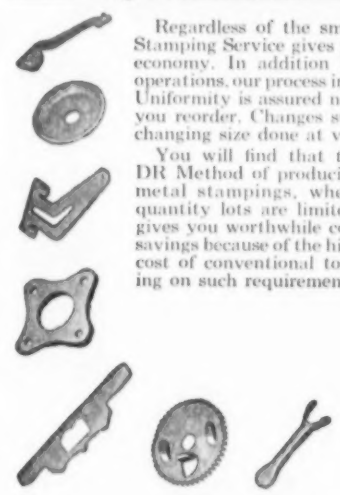
- Four sizes—2-15/16" to 6-15/16" in diameter.
- Wide threading range—2" Head threads all diameters from 3/8" to 2".
- Oversize capacity—2" Head with oversize chaser-holders threads up to 3" with limited thread length.
- All parts of alloy steel, heat-treated and precision-ground.
- Low tool cost—LANDIS Tangential Chasers provide long life between grinds and can be reground for 80% of original length.
- Easy size adjustment and chaser setting.

For additional information on LANDMATIC Heat-Treated Die Heads, ask for Bulletin F-90. Please send specifications when writing. 435

LANDIS *Machine* COMPANY
WAYNESBORO · PENNSYLVANIA · U.S.A.

▲ For more details circle **NED-520 F5** on enclosed inquiry slip ▲

A SMALL LOT
METAL STAMPING SERVICE
AT LOWEST POSSIBLE DIE COST



Regardless of the small quantity needed, DR Stamping Service gives you quality, accuracy and economy. In addition to blanking and piercing operations, our process includes forming operations. Uniformity is assured no matter how many times you reorder. Changes such as relocating holes or changing size done at very moderate cost.

You will find that the DR Method of producing metal stampings, where quantity lots are limited, gives you worthwhile cost savings because of the high cost of conventional tooling on such requirements.

EXAMPLE

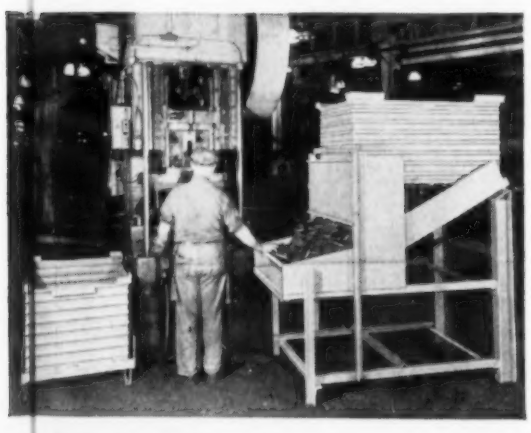
$22.60 for first 100 pieces including tools. $4.10 for each additional 100 pieces. Plus actual market price of material for stamping.

Send us a blueprint of your stamping needs and we will send quotation.

DAYTON ROGERS
Manufacturing Company
Minneapolis 7E, Minnesota

▲ For more details circle **NED-521 F5** on enclosed inquiry slip ▲

tretch or bend boxes and stands



AL
pment

*Patent No. 2,445,038. Other patents pending.

NED-514 F5 on enclosed inquiry slip ▲

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7624

SKF®
BALL AND ROLLER BEARINGS

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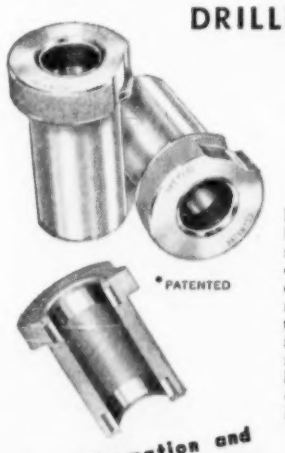
INCREASE PRODUCTION.. SAVE TIME & MONEY
ON YOUR
DRILLING OPERATIONS



*PATENTED

MEYCO
Carbide Inserted Bushings last longer, cost less in the long run

Here is a bushing that combines the best features of steel and carbide; the strength of steel and the long life of carbide. First cost: slightly higher than ordinary steel bushings; their life: many, many times as great. In addition to such obvious savings, MEYCO bushings increase the life of drills and reamers, produce accurate work for a longer period of time, save on machine-down time and on nonproductive man-hours.

☆

Auto manufacturer says: "... the steel bushings previously used averaged about 28 hours life. MEYCO bushings ran 1,168 hours before they were unusable."

For information and prices write for Meyco Bushing Catalog No. 49

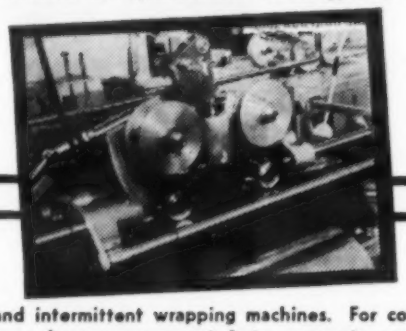
W. F. MEYERS CO., INC., BEDFORD, INDIANA

▲ For more details circle **NED-522 F5** on enclosed inquiry slip ▲

MORE FOR YOUR MONEY FASTER . . .

with Industrial's Rainbow Coder

For one penny, the Rainbow Coder automatically produces from 20-40 square inches of sharp, clear, quality-controlled color imprinting on cellophane, glassine, waxed paper, foil . . . any material that accepts hot roll—leaf imprinting. Easily attached and synchronized to all types of contin-



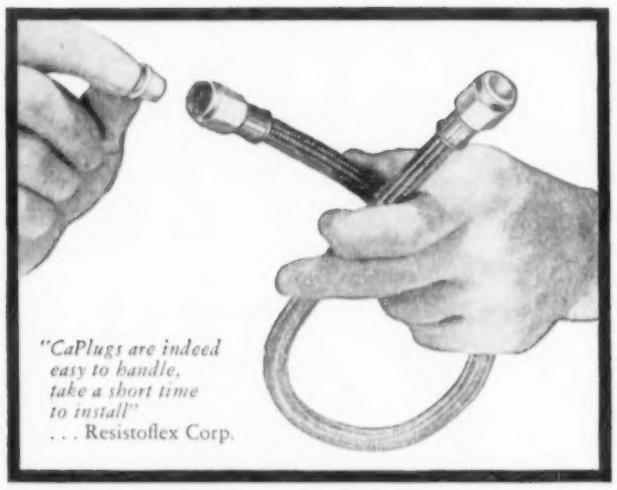
uous and intermittent wrapping machines. For complete details on how you can get faster, accurate and more economical production line package identification, write today for free 24 page catalog. Dept. NED.

Industrial Marking Equipment COMPANY, INC.

454 Baltic Street, Brooklyn 17, New York MAin 4-2601

▲ For more details circle NED-523 F5 on enclosed inquiry slip ▲

see how CaPlugs can protect your products



Just push them in! That's how Resistoflex applies CaPlugs to keep aircraft hose assemblies clean.

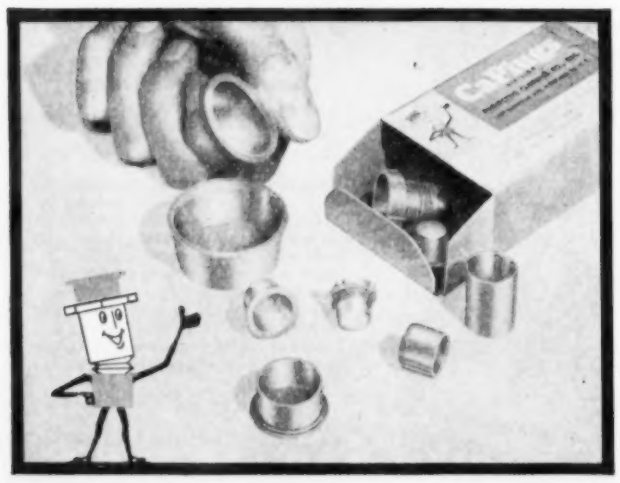
Because they're flexible, these tapered, non-threaded closures slip on easily over plain or threaded fittings or insert readily into round openings . . . to safeguard products during process, storage and transit.

Already in use by thousands of industries on numerous types and makes of tubing, valves, hydraulic components, fittings and machined parts, CaPlugs are easy to spot. *They're red!*

Made of Polyethylene, CaPlugs will not collapse, chip, break or shred under most severe conditions . . . are impervious to all common chemical reagents, acids and solvents. They're plenty *tough* . . . yet extremely *kind* to threads and polished surfaces.

Furnished in five standardized cap and plug designs (both threaded and non-threaded), CaPlugs are stocked in over 200 sizes (up to 8" in dia.) to meet most needs. Make sure you receive complete details and prices.

write for this FREE assortment



CaPlugs DIVISION

PROTECTIVE CLOSURES CO., INC.

2209 ELMWOOD AVE. BUFFALO 23, N. Y.

▲ For more details circle NED-524 F5 on enclosed inquiry slip ▲

HYDRAULIC SPRAY NOZZLE permits intermittent operation

With this 1/4JAUH automatic hydraulic spray nozzle, spraying can be indexed to requirements of any production operation where intermittent spraying is needed. Typical example is spraying cycle timed to passing of parts on conveyor belt. Nozzle is turned on or off by compressed air actuating an air piston in the nozzle. Air is not used for atomization, spray being produced by hydraulic pressure alone. Nozzles are supplied with standard interchangeable orifice tips, producing flat, hollow cone and full cone sprays in wide range of capacities. Maximum recommended capacity is 0.80-gpm. Made by **Spraying Systems Co.**, 3211 Randolph St., Bellwood, Ill.

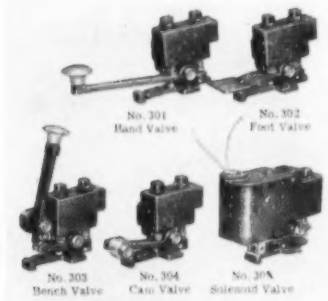
▲ For more details circle NED-525 F5 on enclosed inquiry slip ▲

DESK STABILIZER extends from 17 to 31 in.

This adjustable desk stabilizer is designed to eliminate vibration by changing wobbly desk springboard into a firm platform. Metal constructed unit, installed by means of automatic self-locking mechanism, will extend from 17 to 31 in. and can be telescoped to fit into any desk drawer. It features instant fingertip release, marproof top bumper and floor base. Made by **Underwood Corp.**, Supply Div., Dept. NED, 1 Park Ave., New York 16, N. Y.

▲ For more details circle NED-526 F5 on enclosed inquiry slip ▲

BASIC AIR VALVE adaptable to five types



Series of four-way ¼-in. valves features built-in speed control which regulates a double-acting cylinder in both directions. Same basic assembly can be used as a spring - return hand valve, spring - return foot valve, self-locking bench valve, spring-return cam valve or solenoid-actuated valve. The 300 series unit uses interchangeable actuating levers and has two large plugs for easy cleaning and parts replacement. Valve base and body is an aluminum casting; seals are neoprene; and springs and plungers are bronze, brass or stainless steel. Made by **Mead Specialties Co.**, Dept. SV-40, 4114 N. Knox Ave., Chicago 41, Ill.

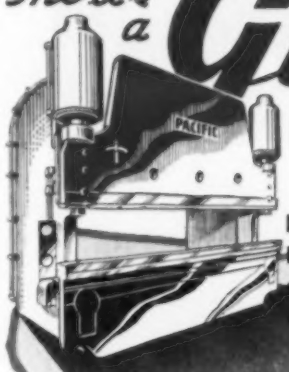
▲ For more details circle NED-527 F5 on enclosed inquiry slip ▲

EXPLOSIONPROOF MOTOR type E in 1 to 5-hp ratings

Made for class I, group D services for high inflammable gases and volatile liquids and class II, group F and G for combustible dusts, this fully enclosed motor is offered in ratings from 1 to 5 hp. It meets NEMA, National Board of Fire Underwriters specifications and is offered as type E with a sparkproof aluminum fan and type EN without a fan. Split dome conduit box is sealed and internal bearing caps extend along the shaft to insure against any spark traveling to the exterior. Frame is one-piece cast iron with external ribs for reinforcement and heat dissipation. Drain plug can be furnished. Both types have asbestos-protected windings, Lubriflush lubrication and normalized castings. Made by **U. S. Electrical Motors Inc.**, Dept. NED, 200 E. Slauson Ave., Los Angeles 54, Calif.

▲ For more details circle NED-528 F5 on enclosed inquiry slip ▲

There's a Giant growing in the West



PACIFIC Press Brakes Now Outsell All Competitors Combined in California and Oregon

This Revolutionary Hydraulic Press Brake, First Introduced in 1946, Has Gained a Tremendous Acceptance by Western Industry and Is Now Rapidly Casting Its Shadow Across the Entire Nation.

THE PACIFIC is the only modern, advanced press brake designed for 1955—It can't be JAMMED—It can't be OVERLOADED—The stroke length is immediately ADJUSTABLE to match the job; imagine changing from a 1" to a 36" stroke in a few seconds! THE PACIFIC HYDRAULIC PRESS BRAKE is VERSATILE—It can be used for Deep Drawing, Heavy Punching, Air Bending, even Straightening. Custom presses can be delivered in a few weeks. Prices are competitive including freight costs from the West Coast. Sales and service available in all major cities.

PACIFIC INDUSTRIAL MFG. CO.

848 - 49th Avenue - Oakland, Calif.

▲ For more details circle NED-529 F5 on enclosed inquiry slip ▲

IS YOUR OVEN OPERATION STEALING PROFITS?

It is well known that inefficient or obsolete oven equipment can only produce increased cost and decreased efficiency.

That's why, every day in every industry, economy-minded manufacturers are utilizing the patented construction features of Jensen PAN-L-HEAT for their baking, drying, curing, and pre-heating operations.

These Exclusive Features Mean a Savings in Time, Cost, Labor.

- SAFE-T-WALL CONSTRUCTION
- ZONED HEAT CONTROL
- BALANCED THERMO DESIGN
- STANDARD "EXPANDABLE" HEATER PANELS

Wouldn't it be wise to know more about these and many other Jensen PAN-L-HEAT features? To have a representative call or for Jensen's free informative brochure, write today.

Jensen SPECIALTIES, INC.

9354 Freeland, Detroit 28, Michigan

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Your PORTABLE POWER PACKAGE

for mixing liquids up to 4,000 centipoises

PATTERSON TYPHOON MIXERS

Lightweight and sturdy, for continuous heavy duty! Specify Typhoon for your batch-to-batch mixing jobs; direct or geared drive; stainless steel shafts and propellers; high quality at moderate price. Write!

The Patterson Foundry and Machine Company

East Liverpool, Ohio, U. S. A.

NEW YORK, BOSTON, BALTIMORE, PHILADELPHIA, PITTSBURGH, DETROIT, CINCINNATI, ATLANTA, CHICAGO, ST. LOUIS, HOUSTON, DENVER, LOS ANGELES, SAN FRANCISCO, SEATTLE

The Patterson Foundry and Machine Company, (Canada) Limited

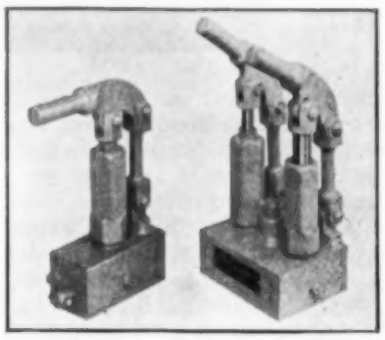
Toronto, Canada

MONTREAL

▲ For more details circle NED-531 F5 on enclosed inquiry slip ▲

HAND HYDRAULIC PUMP

Single and Double Designs to 20,000 Psi
With or without Reservoir



Standard Reservoirs 70- 160- 910 Cu. In. Capacity

Interchangeable Pistons ⅜-½-¾ Inch

1-inch Piston (Special)

Pipe connections ¼" N.P.T.

Handle length is 18 inches.

Unit can be bolted or welded into position.

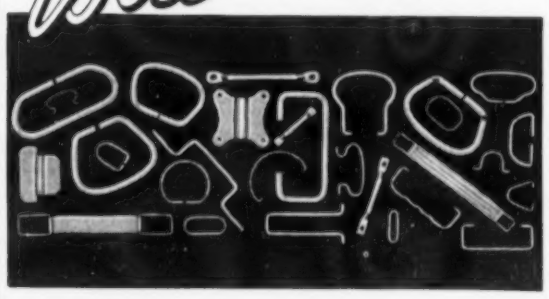
"We specialize in hand pump units to operate in temperatures from minus 65 F to plus 160 F and with any capacity reservoirs required."

The single pump with ½" or ¾" piston now available in stainless steel.

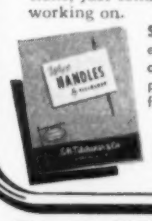
WILLIAM S. PINE
1635 E. 22nd St., Los Angeles 11, Calif.

▲ For more details circle **NED-532 F5** on enclosed inquiry slip ▲

Got a Handle Problem?
Consider the Advantages of
Wire HANDLES...



- Low-cost, attractive, practically indestructible, *wire* handles can be made in any size, shape or metal. Available in any type of finish, they fit right — even where close tolerances are required.
- Titchener engineers have been handle specialists for more than 66 years. If you have a handle problem, let them help you. To get free design recommendations and quotations, just send prints or a sample of the piece you're now working on.



Send For Free Handle Handbook. Shows 73 different styles and sizes of *standard* Titchener handles and clips. Perhaps you can find one to fit your product, thus saving the cost of special die manufacture. Get your copy now.

E. H. TITCHENER & CO.
79 Clinton St. Binghamton, N. Y.

▲ For more details circle **NED-533 F5** on enclosed inquiry slip ▲

A hose of many uses...

"Versatile-Multipurpose" is a heavy duty hose that can handle many different jobs . . . it's efficient for air, gas, high pressure water, paint or cutting lubricants, and many other uses. Exceptionally lightweight and flexible. Specially treated high tensile fibres give extra strength. Non-porous, oil and abrasion-resistant for long wear. Economical, too!

Write for name of nearest distributor.

HKP

QUAKER RUBBER CORPORATION
Philadelphia 24, Pennsylvania

QUAKER PIONEER RUBBER MILLS
San Francisco 7, California

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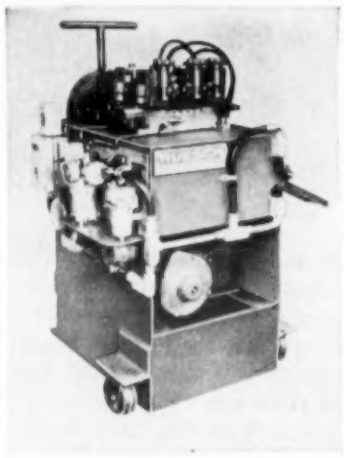
TEMPERATURE METER
has range from —50° to 1000° F

Temperature of gases, solutions, solid objects or practically anything can be accurately measured in 15 to 30 seconds by the Therm-O-Meter which has 7½-ft thermocouple lead. Unit has 7-in. meter calibrated for range from −50° to 1000° F. Self-shielded meter movement allows reading to be taken in the vicinity of generators or heavy electrical conductors without adverse interference. Model 388 is designed with single probe for taking one temperature reading at a time. Model 388-3L has provisions for attaching three leads so that reading can be taken in three different areas through rotation of single switch. Internal compensation circuit corrects room temperature effects on instrument. Made by **Simpson Electric Co.**, 5201 W. Kinzie St., Chicago 44, Ill.

▲ For more details circle **NED-535 F5** on enclosed inquiry slip ▲

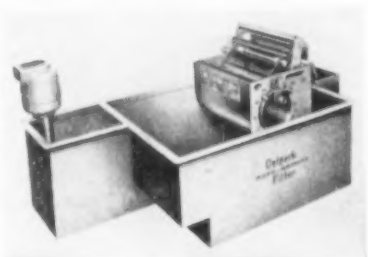
ROLL STRAIGHTENERS
for use on strip, sheet and parts



Only two fast adjustments are needed to set any machine in this line of accurate roll straighteners for a particular straightening job. Units are available to process strip, sheet, plate, bars and semifinished and finished parts ranging from 0.002 to 0.800-in. thickness and in varying widths and materials. Smaller size machines are stocked and larger units are available on relatively short delivery schedule. Made by **H. J. Ruesch Machine Co.**, 410 Mulberry St., Newark 2, N. J.

▲ For more details circle **NED-536 F5** on enclosed inquiry slip ▲

CONTINUOUS FLUID FILTER
for coolants and industrial fluids



Continuous full-flow filtration of coolants, cutting oils and numerous industrial fluids is provided by this Delpark Roto-Gravity filter. Permanent type filter screen removes particles as small as 0.002-in. It is self-cleaning by means of reverse flushing which is time cycle controlled. Residue cleaned from bar stock screen is removed by chain-driven flights. Unit illustrated is mounted in tank to fit around the base of a Cincinnati grinder. Special tanks are available for almost any application, with capacities ranging from 20 to 100 gpm. Made by **Industrial Filtration Co.**, Dept. R-203, Lebanon, Ind.

▲ For more details circle **NED-537 F5** on enclosed inquiry slip ▲

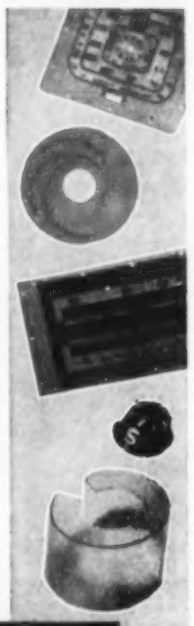
BUILT-IN WATER COOLER
for out-of-the-way installation

Constructed for off-the-floor and out-of-the - way installation, RP recessed panel cooler is offered with water cooling capacities of 6 to 17 gph. Unit is easily connected to a dispensing outlet and serves as a packaged cooling unit and individual water cooler. It will serve one or more fountains. Both air and water cooled models are available in grey hammertone finished welded steel cabinets. Temperature control is mounted on front of cabinet and can be adjusted without tools. Made by **Sunroc Corp.**, Pennell Rd., Glen Riddle, Pa.

▲ For more details circle **NED-538 F5** on enclosed inquiry slip ▲

ONE RELIABLE SOURCE FOR ALL TYPES OF FABRICATED

PLASTICS



From selection of the proper plastic to suit your job, ability to fabricate to precision tolerances in any size, shape or color to on-time deliveries —Sillcocks-Miller can give technical 'know how' and reliable service perfected in 45 successful years of dealing with major manufacturers.

TRIANGLES • SCHEMATIC DIAGRAMS • DISPLAYS
RULES • NAME PLATES • CONTAINERS • JAR COVERS
PANEL BOARDS • INSULATORS and SMALL PARTS
DIALS • PLOTTERS • PROTRACTORS • SLIDE RULES
ADVERTISING NOVELTIES • PLOTTING BOARDS

Send specifications for details and quotations.

THE SILLCOCKS-MILLER COMPANY
12 W. Parker Ave., Maplewood, N. J.

▲ For more details circle **NED-539 F5** on enclosed inquiry slip ▲

TWELVE REASONS WHY...

Bendix* Electric Fuel Pump performs better ... lasts longer!

- **Performance-proven**
- **Longer Life • No Pressure "Droop"**
- **Dependable Operation at −75°F.**
- **Improves Low Temperature Starting**
- **Built-in Pressure Release**
- **Eliminates Vapor Lock**
- **Delivers More Gallons per Hour**
- **Easy to Install • Easy to Service**
- **Low Power Requirements**
- **Economical Operation**
- **Light Weight • Compact**
- **Rugged • Tamper-proof**

Learn more about this new and improved fuel pump. Write for descriptive folder and specifications.

*REG. U.S. PAT. OFF.

ECLIPSE MACHINE DIVISION
ELMIRA, N. Y.

Bendix* Electric Fuel Pump

Bendix* Folo-Thru Starter Drive Stromberg* Aeroquad Carburetor

▲ For more details circle **NED-540 F5** on enclosed inquiry slip ▲

ARMSTRONG *Carbide* TOOL HOLDERS

FOR HIGHER SPEEDS, AND HEAVIER FEEDS

ARMSTRONG Carbide Tool Holders and ARMIDE (Carbide Tipped Cutters) come in cased sets for tool rooms and maintenance departments, and individually in all sizes for general machine shop and production turning. They permit not only the ready machining of sand-filled castings, the hardest and toughest steels as well as many heretofore "unmachinable" materials, but also make practical much heavier cuts and cutting speeds up to 600 f.p.m. on ordinary work. They also run from 10 to 100 times as long between regrindings.

WRITE FOR CATALOG

ARMSTRONG BROS. TOOL CO.

"The Tool Holder People"

5245 W. ARMSTRONG AVENUE, CHICAGO 30, U.S.A.

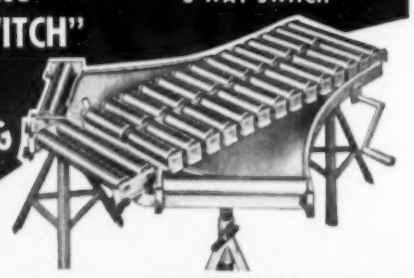
NEW YORK • SAN FRANCISCO

▲ For more details circle **NED-541 F5** on enclosed inquiry slip ▲

METZGAR "FLEX-A-SWITCH"

3 WAY SWITCH

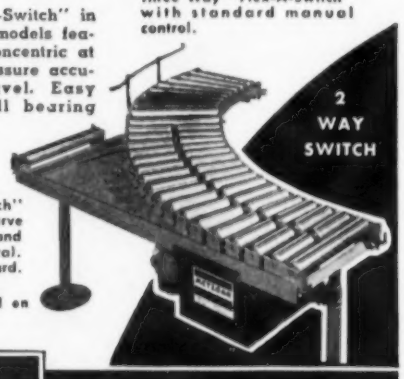
ECONOMICAL
DEPENDABLE
FAST
SWITCHING



Metzgar "Flex-A-Switch" in wheel or roller models feature all axles concentric at any setting to assure accurate line of travel. Easy running — ball bearing throughout.

Three Way "Flex-A-Switch" with standard manual control.

2 WAY SWITCH



Two Way "Flex-A-Switch" at right used with 45° curve to effect a 90° turn, and with electric control (extra). Manual control is standard.

Specific details furnished on request. No obligation.

METZGAR CONVEYOR CO.

416 Douglas St., N. W.

MFRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES & REEL DOLLIES

GRAND RAPIDS 4, MICH.

▲ For more details circle **NED-542 F5** on enclosed inquiry slip ▲

Drill Hardened Steels without Annealing—

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

You Harden It—We'll Drill It—With "HARDSTEEL"

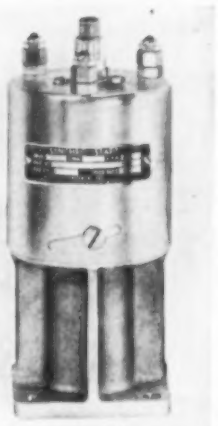
BLACK DRILL COMPANY, INC.

1380 East 222nd St. • Cleveland 17, Ohio

Also makers of— BLACK DRILLING UNITS—AUTOMATIC, SELF-CONTAINED—FOR COST-CUTTING PRODUCTION ON ALL MATERIALS *Write for information*

▲ For more details circle **NED-543 F5** on enclosed inquiry slip ▲

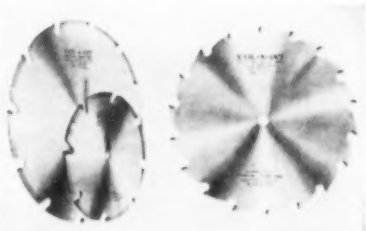
SWITCH TYPE GOVERNORS operate circuits at specific speeds



Addition of a three-element speed sensitive switch to line of governors permits opening or closing of separate circuits at three different speeds in range of 1200 to 10,000 rpm. Although all trip speeds are preset to specifications at the factory, any of the three trip points can be adjusted easily after installation. Operating mechanism consists of rotating governor flyweights acting upon snap switches. Contacts are rated 10 amp at 115-v ac. Standard units are splashproof, and all parts are either plated or noncorrosive metal. Special waterproof and/or fungusproof types can be furnished. Made by **Synchro-Start Products, Inc.**, Dept. 2N, 8151 N. Ridgeway Ave., Skokie, Ill.

▲ For more details circle **NED-544 F5** on enclosed inquiry slip ▲

CARBIDE-TIPPED SAWS in diameters from 5⅞ to 16 in.



Four styles with diameters from 5⅞ to 16 in. make up line of Util-A-Cut carbide-tipped saws made by newly developed tip brazing process that minimizes possibility of tip loss. Hand and power feed styles make up the DeLuxe Safety group, while other two styles are included in the Standard group. Latter group offers choice of two carbide-tipped grinds; rip style, straight top grind, or combination cutting with alternate top bevel of 15 degrees. Bore sizes are available as required. Made by **Deluxe Saw & Tool Co.**, High Point, N. C.

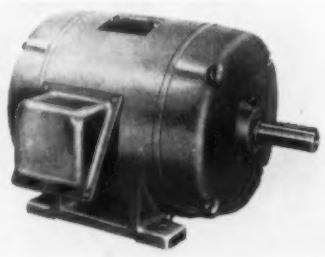
▲ For more details circle **NED-545 F5** on enclosed inquiry slip ▲

POLISHING WHEELS four types are rubber bonded

Wide range of polishing jobs on metal, wood, plastics and glass can be performed with four types of rubber-bonded polishing wheels. The Sawco wheel line permits safe high speed polishing, as the high strength rubber bond has a wide margin of safety. The dense PRH wheel for polishing and removing tool marks in hard steels and alloys is rated for 6000 rpm in the 6-in. size. Other wheel types are Stan-Pol for general polishing and deburring, Qik-Pol for extra fast polishing and Hi-Pol for precision polishing and cleaning. All are self-dressing and nonloading and can be shaped for polishing irregular surfaces and contours. Made by **Sandusky Abrasive Wheel Co.**, 1032 Park Ave., Sycamore, Ill.

▲ For more details circle **NED-546 F5** on enclosed inquiry slip ▲

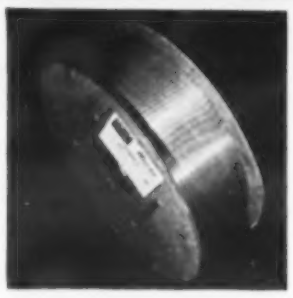
POLYPHASE MOTORS rerated NEMA frame sizes 182-326



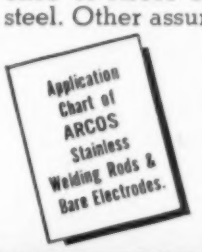
Equipped with corrosion resistant cast iron frame, line of type DP general purpose ball bearing polyphase motors is suitable for indoor or outdoor use. Frames are smoothly contoured so that moisture cannot collect on their surfaces and construction is dripproof. Ventilating air intakes located at the bottom of endplates and air outlets at the base of the frame on each side protect motors from moisture. Rerated NEMA frame sizes from 182 through 326 are available in 1 to 30-hp, three-phase, 60 cycles, 1750 rpm ratings. A 5-hp motor with size 215 frame is shown. Made by **Wagner Electric Corp.**, 6382 Plymouth Ave., St. Louis 14, Mo.

▲ For more details circle **NED-547 F5** on enclosed inquiry slip ▲

Improve Inert Gas Arc Welding with ARCOS CHROMAR Stainless Wire



If you are concerned with inert gas shielded arc welding of stainless steels, you need the extra advantages of Arcos CHROMAR Stainless Spooled Wire. You get close control of wire analysis within the critical range needed for quality weld metal. Assurance of quality comes from the long experience of Arcos as specialists in welding stainless steel. Other assurances of quality weld metal easily deposited are its bright, clean finish, accurate level-layer winding and pre-testing of each batch to assure uniformity.

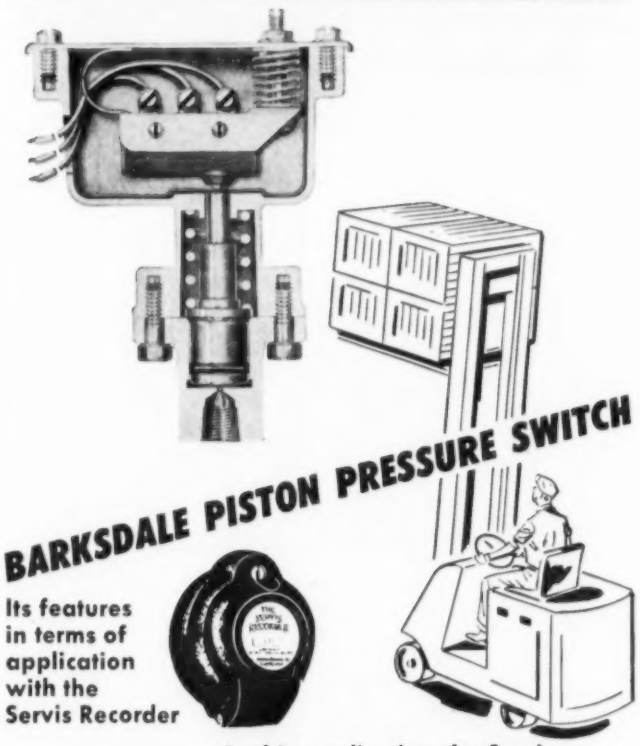


For more information, write today for this Application Chart on Arcos Stainless Welding Rods and Bare Electrodes.

ARCOS CORPORATION

1500 South 50th Street, Philadelphia 43, Pa.

▲ For more details circle **NED-548 F5** on enclosed inquiry slip ▲



BARKSDALE PISTON PRESSURE SWITCH

Its features in terms of application with the Servis Recorder

In this application the Servis Recorder (with a Barksdale Piston Pressure Switch) is used to check on minimum loads, movements and generally on productive time of fork lift trucks.

FEATURES	APPLICATION
NOT CRITICAL TO VIBRATION and will operate in any position.	This feature is most important to the Servis Recorder in its use on the fork lift where it must function with accuracy under vibration, bumping or shaking.
PROOF PRESSURE TO 7000 PSI and actuation as low as 15 PSI.	Even though the minimum load setting may be relatively low, the surges due to jolts or bumps cannot upset the switch accuracy.
±2% REPEAT ACCURACY because of honed piston bore and direct switch action.	Accuracy is invaluable to the Servis Recorder and the Barksdale switch retains its repeat accuracy, even after long service, because there are no wearing parts to cause the settings to drift.
LONG, LONG SERVICE LIFE They last *millions* of cycles because of simplicity, rugged construction.	The constant cycling in loading and unloading operations day after day makes it imperative for the accuracy of the Servis Recorder that the switch have a long service life.

If these features suggest a solution to your problem, please write for Bulletin 9612.

BARKSDALE VALVES

PRESSURE SWITCH DIVISION

5125 Alcoa Ave., Los Angeles 58, California

▲ For more details circle **NED-549 F5** on enclosed inquiry slip ▲

USE THE Nissen METAL MARKER

TO MAKE ENDURING MARKS ON METAL, WOOD, GLASS, PLASTIC-Smooth OR ROUGH SURFACES

The Nissen Metal Marker is a handy, easy-to-use, ball point writing tube. The special, fast drying ink in the 6" x 1" tube withstands heat and weathering and will not chip, fade, peel or rub off in general use.

Available in seven standard colors.

JOHN P. NISSEN, JR., CO.
manufacturers
GLENSIDE, PA.

▲ For more details circle NED-550 F5 on enclosed inquiry slip ▲

Announcing "ADJUSTABLE-STROKE" MIDGET Air-Clamp* CYLINDERS

Actual overall length horizontal models: 3½", 5", 6".

*TRADE MARK

New! —SAVE TIME!

These 6 brand-new Midget Air Clamp cylinders with adjustable strokes variable from ½" to 3" can be used where longer strokes are needed *and* stroke can be "tuned" to exact length wanted even *after* setup is made!

New! —SAVE AIR!

You can save air in large fixtures where dozens or hundreds of "Midgets" are used by adjusting stroke with special spanner wrench furnished with cylinder.

New! —SAVE SPACE & MONEY!

The "nose" on each "Midget" also telescopes into barrel reducing stroke and overall length to save space in cramped quarters! Each Mead "Midget" is guaranteed to give you millions of trouble-free cycles—to be a better value, dollar for dollar, than any comparable cylinder. Priced so low you can almost forget it!

Actual overall height vertical models: 3 9/32", 4 25/32", 5 25/32"

Write Factory or Nearest Mead Man For Bulletin NA-65 (See Index Thomas' Register for address, phone).

THE MEAD MAN CAN HELP YOU CUT COSTS Now!

"MORE per hour with Mead Air Power"

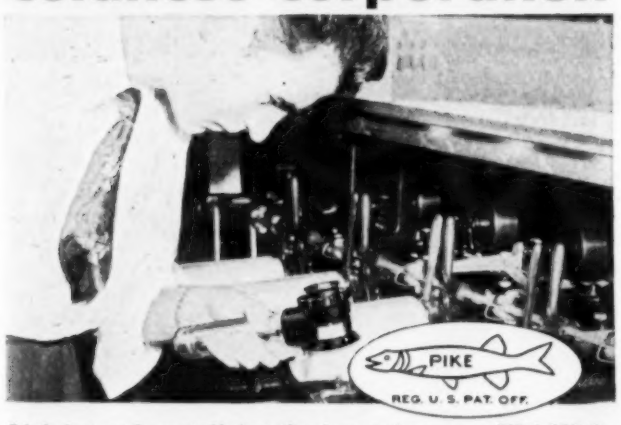
PATHFINDER IN AIR POWER AUTOMATION

MEAD SPECIALTIES COMPANY
4114 N. Knox Ave., DEPT. NA65
CHICAGO 41, ILLINOIS

▲ For more details circle NED-551 F5 on enclosed inquiry slip ▲

ANOTHER FLASH-O-LENS AT WORK INSPECTING FILAMENT GUIDES AT

Celanese Corporation



Lighting and *magnifying* the inspection area, FLASH-O-LENS speeds and simplifies the checking of filament guides on the coning machines at the Narrows, Va., plant of Celanese Corporation of America. That's just one of the many, many jobs on which FLASH-O-LENS is being used because its built-in bulb gives bright illumination —and its accurately ground lenses assure sharply detailed enlargement.

Battery and plug-in models available—priced from $10.95. Write for literature and prices.

E. W. PIKE & CO., Inc.
492 NORTH AVENUE ELIZABETH 3, N. J.

▲ For more details circle NED-552 F5 on enclosed inquiry slip ▲

SOLENOID VALVE is proportional hydraulic type

Torque motor of this dry solenoid servo valve is isolated from the hydraulic fluid. This electrically actuated four-way control is designed to operate in hydraulic systems in the 1000 to 3000-psi range involving flows from 0.1 to 50 gpm. Valves have aluminum alloy bodies and hardened steel valve bushing and sleeve assemblies. They contain a frictionless first-stage push-pull hydraulic amplifier which requires a continuous oil flow of 0.1-gpm. Usual rated signal input is a differential current of ±8 ma. Made by **Moog Valve Co.**, Proner Airport, East Aurora, N. Y.

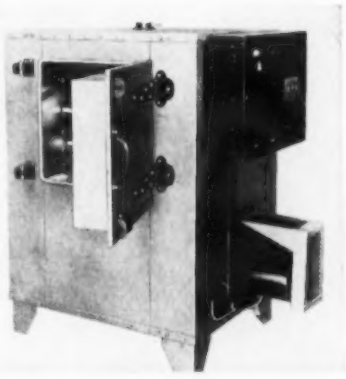
▲ For more details circle NED-553 F5 on enclosed inquiry slip ▲

LIGHTING PLANT can be carried or wheeled

Removable carrying handles, wheels and an extension cord reel are incorporated in this lighting plant for generating 60-cycle alternating current at standard high line voltages. A blower attachment for ventilating and heating for manhole work is available. Generator is powered by a four-cycle engine which has easy hand starting. Both generator and engine are shielded to prevent radio and television interference. Made by **Katolight Corp.**, Box 891-76, Mankato, Minn.

▲ For more details circle NED-554 F5 on enclosed inquiry slip ▲

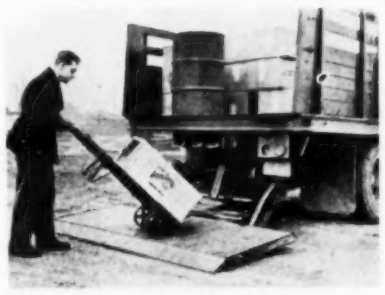
SMALL PRODUCTION OVENS maximum heats from 650° to 850° F



Line of self-contained, portable laboratory and small production ovens is designed for temperature uniformity and built for long, hard usage. Ovens are supplied in horizontal and vertical flow types with maximum temperatures from 650 to 850° F. Capacities for former range from 400 to 1000 cfm; for latter, from 600 to 1200 cfm. Features include electrical interlock for turn-off of heat in case of blower motor failure, manual interlock for purge period operations of blower without heat, high volume adjustable air flow and adjustable exhaust and intake. Made by **W. W. Sly Mfg. Co.**, Dept. A, 4748 Train Ave., Cleveland 2, O.

▲ For more details circle NED-555 F5 on enclosed inquiry slip ▲

TRUCK TAILGATE LOADER in 2000 and 4000-lb capacities



Cutting or altering of cross members and undercarriage is not necessary to mount the Converto-Wood tailgate loader under rear of any 1½-ton or larger truck. Assembly, made in 2000 and 4000-lb capacities, operates hydraulically to lift operator and load or hand truck to truck bed level, then closes as tailgate. Gate flooring is nonskid steel and gate edge is beveled for easy loading. When gate is level with truck floor, it locks in place mechanically. If weight of 50 lb or more is on tailgate before complete closing, power of closing jack automatically shuts off. Also, operator must walk to rear of truck to unlatch safety lock, assuring that anything in way of gate will be seen before gate is opened. Made by **Converto Mfg. Co.**, Cambridge City, Ind.

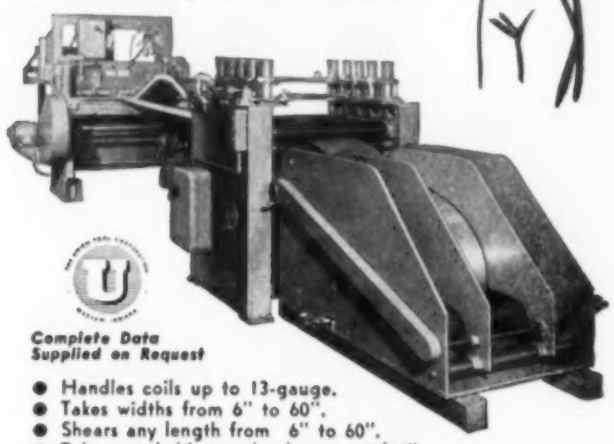
▲ For more details circle NED-556 F5 on enclosed inquiry slip ▲

WITH ONLY ONE OPERATOR THIS UNION MACHINE

- DE-COILS
- LEVELS
- SHEARS
- STACKS

CUTS LABOR COSTS AUTOMATICALLY CUTS MATERIAL COSTS

Buy in coils and cut sheet lengths as needed. No delay.



Complete Data Supplied on Request

- Handles coils up to 13-gauge.
- Takes widths from 6" to 60".
- Shears any length from 6" to 60".
- Tolerance held to only + or — 1/64".
- Only one adjustment to change lengths.
- Speeds to 150 l.f.p.m. depending on lengths cut.
- Neatly stacks sheared pieces automatically.
- Will handle steel, aluminum, etc.

UNION TOOL CORP.
318 E. MARKET ST., WARSAW, IND., U. S. A.

USERS SAY UNION CUTS COSTS, SPEEDS PRODUCTION

▲ For more details circle NED-557 F5 on enclosed inquiry slip ▲

REMINGTON STUD DRIVER saves up to 80% on fastening costs... speeds up the job!

"I installed metal window frames and partitions in record time"—says one maintenance man about the Remington Stud Driver. And you quickly realize how he did it when you see this powder-actuated tool drive 4 and 5 studs per minute in steel and concrete. That means real savings in time and labor.

Compact and portable, the Stud Driver weighs only 6 pounds and requires no outside source of power. It's ready to *go*—any time, anywhere, even in confined places inaccessible to ordinary fastening methods. And with the power of its 32-caliber cartridge, you know a stud is set to stay!

What's your fastening job?

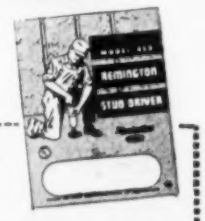
Whether anchoring wood plates to concrete floors or hanging radiator housings to concrete or brick—you can depend on the Remington Stud Driver to save you money. Send the coupon below for further information.

"If It's Remington—It's Right!"

Remington DU PONT

Listed & Approved by Underwriters' Laboratories, Inc.

MAIL THIS COUPON TODAY



Industrial Sales Division, Dept. NED-6
Remington Arms Company, Inc.
Bridgeport 2, Connecticut

Please send me a *free* copy of the new booklets showing how I can cut my fastening costs.

*Name*_____
*Position*_____
*Firm*_____
*Address*_____
*City*_____ *State*_____

▲ For more details circle NED-558 F5 on enclosed inquiry slip ▲

Attention: ALL Bottlers

FULLER'S 305 IS A VERSATILE NEW ADHESIVE FOR LABELING ALL BOTTLES

Whether you bottle beer, pickles or pop, pills, shampoo or shoe polish, you can count on Fuller's new 305 to do a clean, smooth job. Fuller's 305 won't stain or wrinkle labels. Because it is *ice-proof* and *water-resistant* you can be sure that labels will stay tight permanently. It machines well in a wide variety of labeling equipment, labels all kinds of paper stock . . . is light in color.

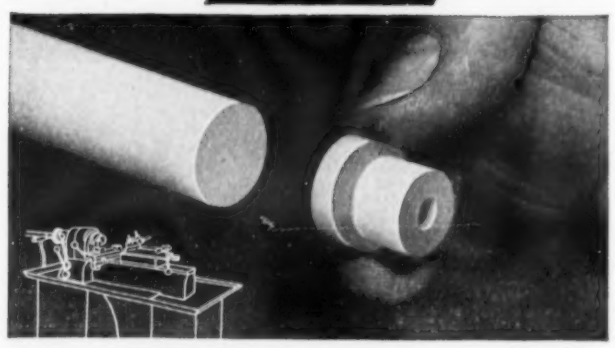
Send for free folder with technical information on Fuller's 305 for your bottling line.

FULLER'S 305 ADHESIVE

H. B. FULLER COMPANY—General Offices: 181 W. Kellogg Blvd., St. Paul 2, Minn. Plants: St. Paul, Kansas City, Cincinnati, Atlanta, Chicago, San Francisco, Newark, Buffalo, Portland, Dallas.

▲ For more details circle **NED-559 F5** on enclosed inquiry slip ▲

POLYPENCO® **NYLON** SHAPES



NOW! Save on Nylon Bushings

eliminate lubrication . . . improve wear . . . reduce noise

- Design bearings, packings, rollers, and wear parts from Polypenco rods
- Eliminate molding dies . . . machine in your own shop
- Use standard metalworking tools
- Sizes from ⅛" to 6½"
- Uniform high quality . . . technical help in design and fabrication.

WRITE FOR BULLETIN ON NYLON SHAPES

The POLYMER CORPORATION of Penna. • Reading, Penna.
In Canada: Polypenco, Inc., 2052 St. Catherine, W. Montreal, P.Q.

POLYPENCO® NYLON
... teflon* and other non-metallics

Stocks: Reading • Chicago • Los Angeles • Newton (Mass.) • Branford (Conn.)

*Trademark for DuPont tetrafluoroethylene resin

▲ For more details circle **NED-560 F5** on enclosed inquiry slip ▲

CONTROL MAINTENANCE COSTS by:

1. Reducing emergency work
2. Reducing down-time
3. Scheduling man-hours

You get better maintenance control with planned Maintenance Management. Here is an effective system for planning . . . performing and controlling your maintenance program. Illustrated in flow-chart form, you will readily see the cost-saving advantages of a maintenance system that schedules man-hours . . . eliminates preventable breakdowns . . . controls all maintenance operations. Send today for this detailed 8-page booklet, and streamline your maintenance operation at the lowest clerical and equipment cost possible.

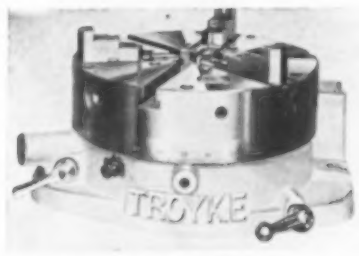
Remington Rand
Room 1654, 315 Fourth Ave., New York 10

Kindly send your free booklet "Assured Equipment Productivity Through Maintenance Management" —X1383

NAME
TITLE
FIRM
ADDRESS
CITY ZONE STATE

▲ For more details circle **NED-561 F5** on enclosed inquiry slip ▲

WORK INDEXER
with chuck or T-slotted turntable



Usable in connection with milling, drilling, jig boring, grinding and other machining operations, this Roto-Indexer features rapid, positive, accurate indexing. It has 20-station index plate, and any or all stations can be blocked out with use of screwdriver. Rigid locking center bearing is adjustable for wear. Unit can be used in horizontal or vertical position. Model AC-12 has 12-in. diameter steel body chuck, and AX-2 has 12-in. platen with a 4½-in. diameter pilot. Model AH-12 has a 12-in. diameter T-slotted turntable, while AL-15 has a 15-in. T-slotted turntable. Made by **Troyke Mfg. Co.,** 2426 Spring Grove Ave., Cincinnati 14, O.

▲ For more details circle **NED-562 F5** on enclosed inquiry slip ▲

REVERSING DRUM SWITCH
for across-the-line starting

Usable for across-the-line starting and reversing of single or polyphase alternating current motors, size 1 drum switch has large legible nameplate to indicate the handle position. Switch is offered with choice of maintained-contact or spring-return-to-off, and no tools are required for simple conversion. Nylon shaft bearings assure long mechanical life, and heavy plated copper contacts are used. Installation features include slip-on cover, pressure wire connectors, ample wiring space and accessible mounting holes. Made by **Square D Co.,** 4045 N. Richards St., Milwaukee 12, Wis.

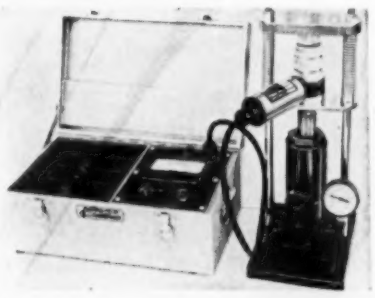
▲ For more details circle **NED-563 F5** on enclosed inquiry slip ▲

OVERHEAD CONVEYOR CHAINS
impregnated with dry lubricant

Dimensionally interchangeable with other makes, series of drop forged rivetless chains for overhead conveyor use features dry lubricant - impregnated pins and machined bearing surfaces of both inner and outer links. Need for surface lubrication is eliminated. Operation can be in temperatures ranging from −30 to 800° F. Chains are available in three pitches and L-458, L-468, L-678, L-998 and L-9118 sizes. Ultimate strength of the L-458 chain is 53,000 lb minimum. Each 10-ft length is held to a tolerance of −0.000-in. to +⅛-in. Made by **U. S. Engineering Co.,** Dept. 101, 14561 Lesure Ave., Detroit 27, Mich.

▲ For more details circle **NED-564 F5** on enclosed inquiry slip ▲

MOISTURE METER
tests granular substances

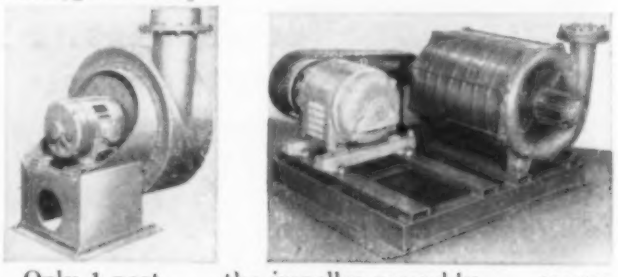


Percent of moisture in granular substances can be indicated by the improved G5 Moisture Register, an electronic instrument. Miniature tubes used in the radio frequency power absorption circuit result in a compact, stable instrument giving instantaneous readings as low as 0 per cent within close tolerances. Other improvements in the portable unit are an electronically regulated power supply which affords control of voltage variances over a wider range and metal reinforced electrode made of polystyrene plastic. Made by **Moisture Register Co.,** Dept. NED, 1510 W. Chestnut St., Alhambra, Calif.

▲ For more details circle **NED-565 F5** on enclosed inquiry slip ▲

LAMSOM BILLMYRE
offers centrifugal blowers in cast iron or heavy steel

Lamson Billmyre Centrifugal Blowers are encased in heavy steel or ¼" cast iron housing. Designed for air or gas, they range from 100 to 25,000 C.F.M. . . . from ½ to 500 hp.



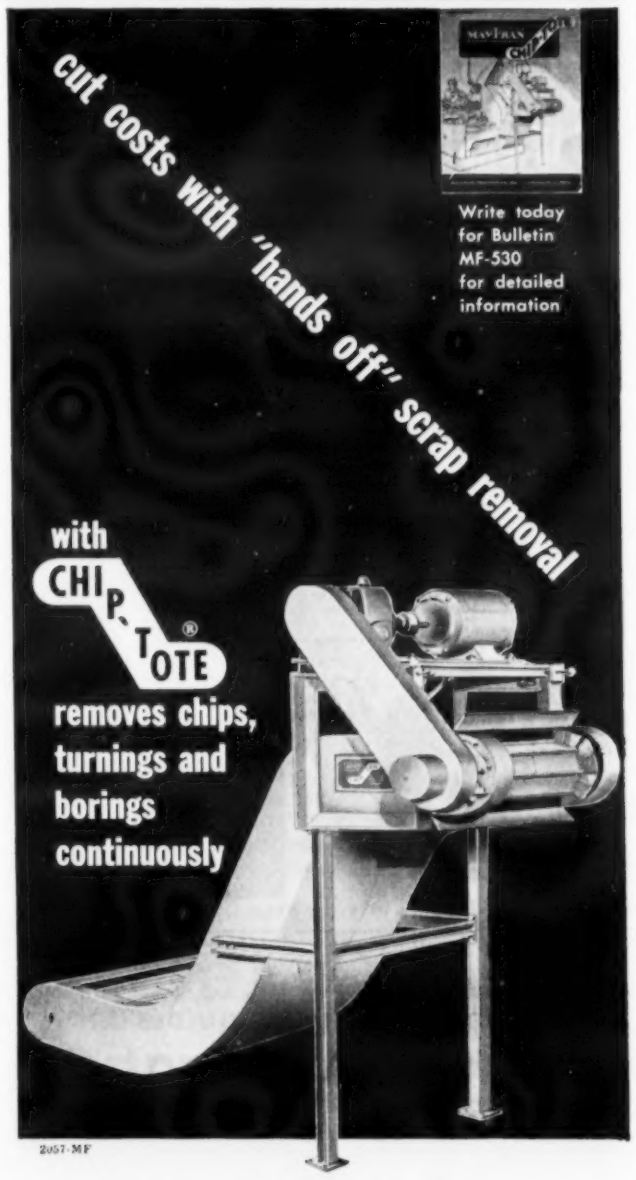
Only 1 part . . . the impeller assembly . . . moves. No internal lubrication is required. Heavy duty ball bearings of standard manufacture need lubrication at most 4 times yearly. Are mounted on accessible, open-type brackets outside the housing.

Air is clean, oil-free. Delivered without pulsation. Pressure or vacuum remains nearly constant at all capacities . . . with horsepower proportional to actual air volume delivered.

Lamson Billmyre Centrifugal Blowers are assembled from parts made by Lamson. Delivery is rapid.

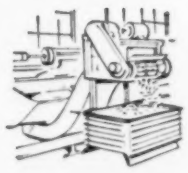
For further information on Lamson Billmyre Air Blowers, Exhausters, and Gas Boosters, write today for bulletin B-6 to **Lamson Corporation, 2026 Lamson Street, Syracuse 1, N. Y.** *Advt.*

▲ For more details circle **NED-566 F5** on enclosed inquiry slip ▲



Cut production costs by eliminating downtime for manual scrap removal!

While machines are in continuous operation, the MAY-FRAN CHIP-TOTE automatic scrap conveyor removes borings, turnings and chips from your high production machine tools. Design features permit a wide range of sizes to fit all standard multiple spindle or automatic machine tools.



To slash production costs, specify . . . MAY-FRAN CHIP-TOTE automatic scrap conveyors.

DESIGNERS AND ENGINEERS OF COMPLETE SCRAP HANDLING SYSTEMS

MAY-FRAN ENGINEERING, INC.

1711 CLARKSTONE ROAD • CLEVELAND 12, OHIO

▲ For more details circle **NED-567 F5** on enclosed inquiry slip ▲

you can make it better with STAR LAVOLAIN®

Here's **another** outstanding member of the Star family of electrical porcelains. This steatite ceramic is ideal for small parts which must provide excellent mechanical strength plus good thermal shock resistance.

LAVOLAIN'S high dielectric strength at elevated temperatures makes it basic for small rods, bushings, resistance-wire holders, and switch bases for use in a wide variety of electrical products. It is available in various colors to conceal assembly stains or to provide identification of electrical circuits or parts of equipment.

Ball and socket insulating bushings made of LAVOLAIN provide superior high temperature wire insulation, especially when flexibility is a must. These ball and socket bushings are stocked in 13 standard sizes.

Complete information of LAVOLAIN and the complete Star family of electrical porcelains is contained in this 26-page, fact-filled catalog. Write for a free copy.

Star Porcelain Company
50 Muirhead Avenue, Trenton 9, New Jersey.

STAR porcelain company

▲ For more details circle **NED-568 F5** on enclosed inquiry slip ▲

UNIQUE *new* PORTABLE TELEPHONE UNIT

a complete intercom package

DESIGNED FOR SERVICE AND EMERGENCY CREWS

Lightweight and completely portable communications unit using Wheeler Sound Powered Electric Telephone Handsets, which require no batteries or outside power . . . the voice itself generates the current.

This unit consists of two handsets, each equipped with 4-ft. Neoprene covered Koiled Kord retractile-type cables, 250 ft. of 2-conductor heavy duty Neoprene covered cable, and the special reel which is designed to permit clear, undistorted speech transmission at any distance up to 250 ft. even while unwinding. Additional 150 ft. of cable can be supplied and stored on reel if desired.

Thoroughly engineered and service-proved equipment . . . rust and corrosion resistant. Write for full information.

- NO BATTERIES
- NO MAINTENANCE
- NO OUTSIDE POWER
- TROUBLE-FREE SERVICE
- NO ELECTRICAL HAZARDS

WHEELER *Sound Powered Electric* TELEPHONES
THE WHEELER INSULATED WIRE CO., INC.
Division of The Sperry Corporation
1108 East Aurora Street Waterbury 20, Connecticut

1WH55

▲ For more details circle **NED-569 F5** on enclosed inquiry slip ▲

Order USG® BRUSHES because...

- Years of practical experience in all types of applications assure you of the proper USG brush for your equipment.
- Controlled manufacturing uniformity gives you the same brush every time you order.
- There is a USG representative near your plant. See him or write for your copy of the USG Brush Catalog B49 today.

THE UNITED STATES GRAPHITE COMPANY
DIVISION OF THE WICKES CORPORATION
SAGINAW, MICHIGAN

198-A

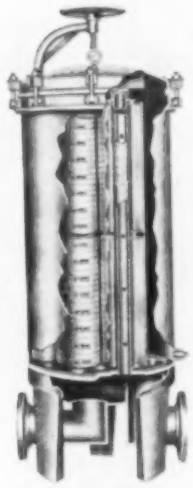
▲ For more details circle **NED-570 F5** on enclosed inquiry slip ▲

PAINT SPRAY GUN
will operate on 5-psi pressure

Model P-300 air-operated siphon paint spray gun is designed to operate on air pressure as low as 5 psi. Lightweight unit draws from a 1-qt cup and is suitable for such unusual jobs as stripe painting, touch up work, stencil ink spraying in shipping rooms, applying silicone mold release oils and application of metal surface corrosion inhibitors. Made by **John B. Moore Corp.**, Peerless Bldg., Nutley 10, N. J.

▲ For more details circle **NED-571 F5** on enclosed inquiry slip ▲

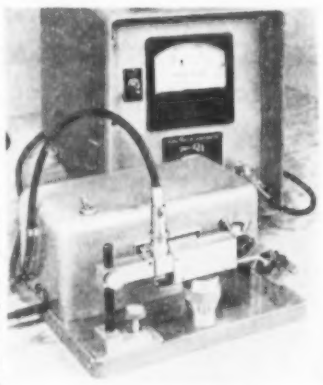
LIQUID FILTERS
capacities range from 25 to 900 gpm



A wide variety of liquids including oil, coolants and cleaning solutions can be handled by this line of Full Flow filters with capacities from 25 to 900 gpm. They use 1 to 36 cartridge type pleated-paper filtering elements which are easily replaced. Elements are inert and will not remove additives found in many oils. Neoprene gasketed cover is readily removed for access to interior. Pressure drop is only 4 psi at operating viscosity of 170 SUS. Made by **Houdaille-Hershey of Indiana, Inc.**, Filtration Div., 70 South Ave., Lebanon, Ind.

▲ For more details circle **NED-572 F5** on enclosed inquiry slip ▲

ROUGHNESS METER ACCESSORY
checks around surfaces of rotation



Profilometer roughness measurements can be made on a production basis around surfaces of rotation with the type RE Rotary Pilotor. Surfaces of 1/32 to 2-in. radius or more can be measured, depending on the size of the part. Pilotor spindle is belt-driven from a gear motor in its housing. Workpiece is held in an adapter which in turn is held in the spindle. Pulleys can be furnished to provide the same tracing speed for surfaces of different radii. Reciprocating rotation through any arc from 10 to 350 degrees can be selected, or continuous rotation can be obtained. Made by **Micrometrical Mfg. Co.**, Dept. 9, 345 S. Main St., Ann Arbor, Mich.

▲ For more details circle **NED-573 F5** on enclosed inquiry slip ▲

ROOF VENTILATORS
handle up to 16,500 cfm of air

Weighing only 250 lb in the largest size, this aluminum centrifugal ventilator is easy to install and maintain. Motor and belt drive can be inspected merely by raising the hinged hood. By removing four bolts, the entire shell can be lifted off for cleaning the blower wheel. Ventilator is made in sizes with capacities from 1000 to 16,500 cfm. It has low silhouette, and motor is sealed from air stream. Quiet operation, low tip speeds, rubber mounting drive assembly, light starting torque aluminum blower wheel and ease of installation are added features. Made by **Loren Cook Co.**, Depot & Runn St., Berea, O.

▲ For more details circle **NED-574 F5** on enclosed inquiry slip ▲

DEGREASER! engine shampoo

QT. SIZE CONCENTRATE MAKES 2 GALLONS

Takes cling out of oil and grease . . . emulsifies it . . . so that all dirt may be hosed off as easily as you rinse hands under water faucet.

Launders engines faster, more completely, and safer than steam cleaning (warm the engine). Self scouring action brings out factory new appebrance . . . provides accurate visual inspection . . . Gunked engines run cooler.

Get Genuine Gunk in quart and larger sizes at better wholesale auto suppliers throughout the country . . . Flatly refuse imitations.

CLEANS MACHINERY TOO

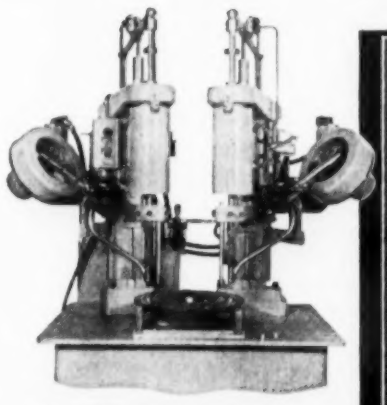
The CURRAN CORPORATION, Lawrence, Mass.

▲ For more details circle **NED-575 F5** on enclosed inquiry slip ▲

Dependability! Precision! Speed!....

Three Important Production Factors Presented by the DPS LINE OF ASSEMBLING EQUIPMENT

● Do you have a feeding or assembly problem? Remember that DPS stands for equipment that will bring you greater earnings, lower costs and on-time schedules . . . A complete line of modern power-driven machines that assures performance in keeping with the increased tempo of present-day production.



Give Us Your Problem– Send Sample Asssembly No Obligation!

POWER SCREWDRIVING MACHINES
●
SELECTIVE PARTS FEEDERS
●
SPECIAL ASSEMBLY MACHINES

DETROIT POWER SCREWDRIVER CO.

2819 W. FORT ST. DETROIT 16, MICH.

▲ For more details circle **NED-576 F5** on enclosed inquiry slip ▲

POR-ROK (POUR ROCK)

Fast Setting Cement

PERMANENTLY ANCHORS BOLTS IN CONCRETE WITHIN

30 MINUTES!

Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

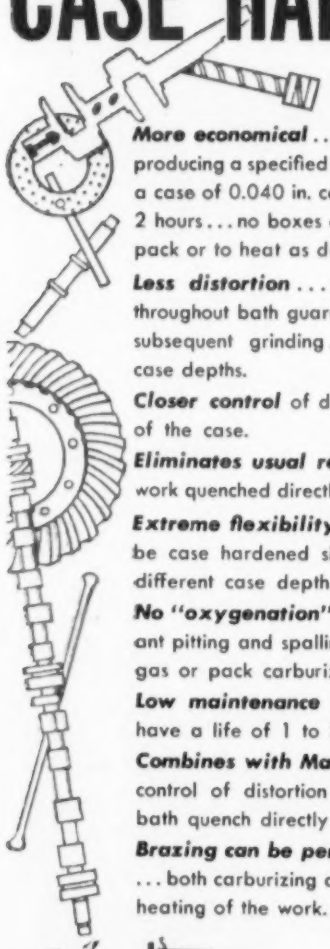
Por-Rok also makes quick, lasting repairs to holes and breaks in concrete floors with little or no interruption to normal traffic. It is self-bonding, self-leveling, oil-resistant, does not shrink. Compression strength of 4500 lbs. p.s.i. in one hour GUARANTEED.

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 25th ST. • CLEVELAND 13, OHIO SINCE 1927

▲ For more details circle **NED-577 F5** on enclosed inquiry slip ▲

Cut costs with faster CASE HARDENING



More economical ... is the fastest method of producing a specified case depth—for example, a case of 0.040 in. can readily be produced in 2 hours ... no boxes or retorts to pack and unpack or to heat as dead loads.

Less distortion ... temperature uniformity throughout bath guaranteed within 5° F. ... less subsequent grinding ... permits more shallow case depths.

Closer control of depth and other properties of the case.

Eliminates usual reheating operation ... work quenched directly from carburizing bath.

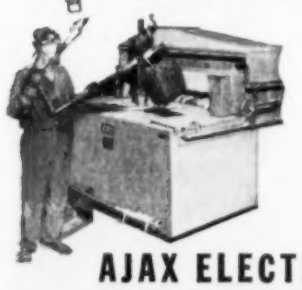
Extreme flexibility ... several batches may be case hardened simultaneously—each to a different case depth.

No "oxygenation" of the case, with attendant pitting and spalling, as frequently occurs in gas or pack carburizing.

Low maintenance costs ... plain steel pots have a life of 1 to 3 years.

Combines with Martempering ... for best control of distortion ... by an isothermal salt bath quench directly after carburizing.

Brazing can be performed simultaneously ... both carburizing and brazing done with one heating of the work. Brazing cost—nothing.



390 LBS. OF WORK AN HOUR
... from an Ajax furnace no larger than your desk!

180 lbs. of metal body screws per charge are given case depths ranging from 0.004" to 0.010" as required.

AJAX ELECTRIC COMPANY

The world's largest manufacturer of electric heat treating furnaces exclusively

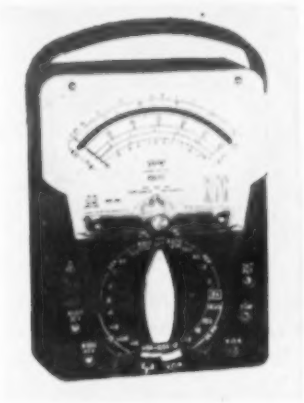
103 Allen Street
Philadelphia 23, Penna.

AJAX Trade Mark

AJAX HULTGREN **ELECTRIC SALT BATH FURNACES**

▲ For more details circle **NED-578 F5** on enclosed inquiry slip ▲

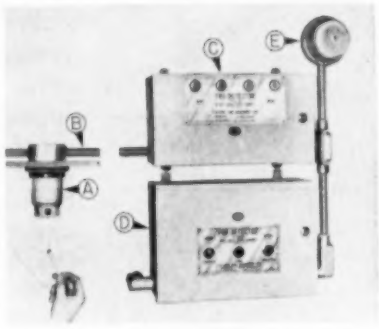
VOLT-OHM-MIL-AMMETER
has protection against overloads



Seventy ranges and frequency compensation up to 20 kc, sufficient for accurate readings over the entire audio range, are incorporated in the model 630-A volt-ohm-mil-ammeter. Meter is protected against overloads, and accuracy is within 1½ per cent on direct current to 1200 v and 3 per cent on alternating current to 1200 v. Also featured are temperature compensation, pressure contact switching and banana plugs. Made by **Triplett Electrical Instrument Co.**, 10 Harmon Rd., Bluffton, O.

▲ For more details circle **NED-579 F5** on enclosed inquiry slip ▲

FIRE DETECTION SYSTEM
gives alarm seconds after ignition



Quick detection of the smallest smoldering fire is made by C-O-Two Pre-Detector System which gives visual and audible alarms, closes fire doors or performs other functions within seconds after the ignition of various type fires. Pre-detector heads, containing a radioactive element, are spaced on centers up to 60 ft apart or up to 30 ft from side walls. System is reported to have virtually universal application for indoor locations. It operates when gas or smoke is indicated. Where it is desirable to know the fire location, a space indicating cabinet can be connected through separate circuits. Made by **C-O-Two Fire Equipment Co.**, Dept. J, U. S. Highway No. 1, Newark 1, N. J.

▲ For more details circle **NED-580 F5** on enclosed inquiry slip ▲

CIRCUIT TESTING ACCESSORY
for use with tong test ammeters

Plugged directly into wall or power outlets, this model 40-A Amprobe Energizer permits making instant voltage and amperage readings of circuit with tong test type volt-ammeters. It serves as a "split" plug to divide double-conductor line cords at the outlet. It can increase split-core ammeter sensitivity by ten times and also permits measuring line voltage at the outlet while the appliance is connected to the line. Price is $3.75. Made by **Pyramid Instrument Corp.**, Dept. NED, 630 Merrick Rd., Lynbrook, N. Y.

▲ For more details circle **NED-581 F5** on enclosed inquiry slip ▲

ELECTRIC STERILIZERS
for evaporation tests, sample drying

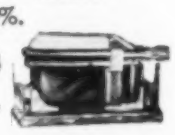
Two sizes and two temperature ranges are available in line of electrically heated hot wall sterilizers. Suitable for clinical and industrial laboratories for sterilizing glassware, evaporation tests, sample drying and other uses, line has maximum temperature of 500° F. All models have extra loading capacity as there are no inside heating elements. Walls are heated by external clamped-on heaters. Silicone gaskets, hydraulic thermostat and 3-in. glass wool insulation are features. Made by **Chicago Surgical & Electrical Co.**, Dept. 10, 3070-82 W. Grand Ave., Chicago 22, Ill.

▲ For more details circle **NED-582 F5** on enclosed inquiry slip ▲

COMPLETELY NEW DUAL ACTION SANDER

"You gotta' see it to believe it." Two Way action speeds the job, retards loading of sand paper even on solder or surfacer. Cuts costs up to 80%.

***Easy* FOR EVERY JOB**



Dual Action or Straight-Line, electric or air.

SEE YOUR JOBBER OR WRITE FOR LITERATURE

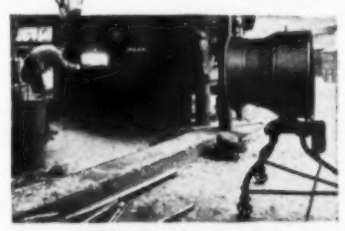
DETROIT SURFACING MACHINE CO.
1265 E. EIGHT MILE ROAD DETROIT 20, MICHIGAN

▲ For more details circle **NED-583 F5** on enclosed inquiry slip ▲

For Man-Cooling!

Coppus Airplane Type Heat Killer®

cools large areas — restores efficiency



HEAT KILLER on the job in drop forge plant.

Steel mills, drop forge plants, foundries and other plants with hot working conditions find this Coppus Heat Killer increases worker efficiency . . . at reasonable cost. *A single fan cools large areas.*

Other types also available for cooling furnaces, electrical equipment, for driving out gases, drying out products, drawing out fumes. Write now for detailed information. COPPUS ENGINEERING CORPORATION, 406 PARK AVENUE, WORCESTER 2, MASSACHUSETTS.

ANOTHER **COPPUS** "BLUE RIBBON" PRODUCT

▲ For more details circle **NED-584 F5** on enclosed inquiry slip ▲

IMMEDIATE DELIVERY
FROM FACTORY STOCKS

Is rust or corrosion in your lines a problem? Must your lines resist acids, remain sanitary? Now you can get immediate shipment from our factory of #303 and #316 Stainless Steel Snap-Tite Couplings. No waiting for special production runs on sizes through 2".

Steady demand has made Stainless Steel Couplings a standard Snap-Tite product. And, because they're standard, the price is lower.

Liberal discounts to O.E.M. users

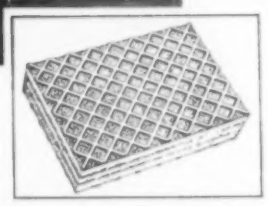
SNAP-TITE COUPLINGS CAN HANDLE ALMOST ANYTHING THAT FLOWS

See Snap-tite's representative or write for Bulletin 240

Snap-tite, INC.
UNION CITY 4, PENNSYLVANIA

▲ For more details circle **NED-585 F5** on enclosed inquiry slip ▲

Quiet Heavy Machinery With AIR-LOC* 4-17-4



Save 50% on installation

NO BOLTING CEMENTING WAITING

AIR-LOC lifetime Bakelite vinyl-cushion machine pads absorb vibrations and shock loads. They reduce noise, improve machine performance and extend life. Pads withstand repeated loadings up to 1000 psi and are re-usable. Pads are unaffected by oil, water, brine or chemicals. Machines are readily leveled by shimming. Free sample available. Send for bulletin "Introducing AIR-LOC"

*Registered trade mark Pat. Pending

CLARK • CUTLER • McDERMOTT CO.
FRANKLIN, MASSACHUSETTS

▲ For more details circle NED-586 F5 on enclosed inquiry slip ▲

how NORGREN MICRO-FOG LUBRICATION

solved wear problem on 6 printing presses

for UNIVERSAL MATCH CORP.

- eliminated flaking and galling of cam track
- eliminated heating and excessive wearing of bearings
- eliminated constant squealing of barrel cam
- eliminated daily manual lubrication

C. A. Norgren CO.
3405 So. Elati, Englewood, Colo.

For complete details write for NORGREN BLUEPRINT MF18

▲ For more details circle NED-587 F5 on enclosed inquiry slip ▲

How to Bond New Concrete to Old Concrete...permanently!

The answer is

WELD-CRETE®

Weld-Crete is the amazing, job-proved liquid bonding agent (approved by New York City Board of Standards and Appeals) which enables you to *permanently* bond new concrete or cement topping *directly* to old concrete surfaces. Eliminates from permanent concrete repair work the need for costly, time-consuming drilling, chipping, roughening or scarifying of old concrete base. To use, simply apply a brush or spray coat of Weld-Crete to old dirt and oil-free concrete surface (floor, ramp, driveway, curb, etc.) . . . let dry (about 1 hour), then apply new concrete. Your repair is *permanent* . . . a Weld-Crete bond *never lets go!* When used with quick setting cement topping you can lay new floors, ramps, driveways, etc. one day and run heavy truck traffic over them the next. Ask your Building Materials Dealer . . . or write us direct.

Typical WELD-CRETE Applications: In this case, Weld-Crete was used by National Brick Co., Terra Cotta, D. C., to bond new ¾" concrete topping directly to old, badly chipped and spalled floor slab which had been subjected to ceaseless heavy truck traffic. Plant shut-down time eliminated because Weld-Crete enabled National's own mechanics to do job over week end.

NATIONAL BRICK COMPANY

LARSEN PRODUCTS CORPORATION
BOX 5756-N • BETHESDA, MD.

▲ For more details circle NED-588 F5 on enclosed inquiry slip ▲

AIR HYDRAULIC BOOSTERS
develop up to 18,800-psi pressures

High volume low air pressure is converted to low volume, high hydraulic pressure by Powermatic air hydraulic boosters. Constructed of aluminum alloy, booster measures 7¼-in. diameter by 11¾-in. high and weighs only 15 lb. It can be used to test valves, operate hydraulic cylinders, build accumulator pressures or burst-test pipe and tube. Reciprocating air-motor piston is directly connected to hydraulic piston for power transfer without loss. Hydraulic pressure can be controlled by regulating air input. Unit utilizes air pressures between 30 to 150 psi to develop hydraulic pressures to 18,800 psi. Made by **Powermatic Sales Co.**, Dept. 5, 258 Kenmore Blvd., Akron 1, O.

▲ For more details circle NED-589 F5 on enclosed inquiry slip ▲

SAFETY TAGS
impervious to moisture, dirt, wear

Idesco safety tags have a satin plastic finish which accepts pencil writing. Writing can be erased and tags used over repeatedly without damage. They are impervious to wear, tear, dirt, moisture, oil staining and deterioration and resist most acids. The 3⅛ x 5¾-in. tags are offered with a wide variety of legends, mostly of a safety nature, and can be obtained in special sizes and legends. Made by **Identification Service Corp.**, Dept. T, 144 W. 46th St., New York 36, N. Y.

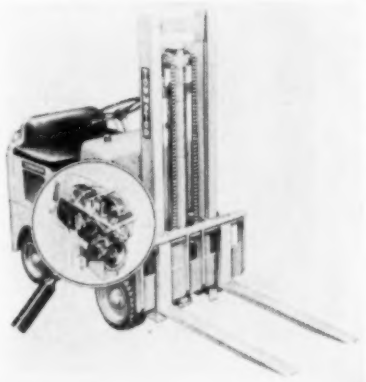
▲ For more details circle NED-590 F5 on enclosed inquiry slip ▲

SAFETY SHOES
leather is silicone treated

Treatment with Dow Corning Sylflex, a silicone compound, renders this line of leather safety shoes waterproof, yet allows them to breathe. Sylflex also stops chemical, oil, bleach and caustic absorption. Shoes, available in both oxford and high styles, have neoprene soles and Dacron stitching, making them suitable for use under all wet conditions. Made by **Record Industrial Co.**, Dept. SC-5, 3301 Arch St., Philadelphia 4, Pa.

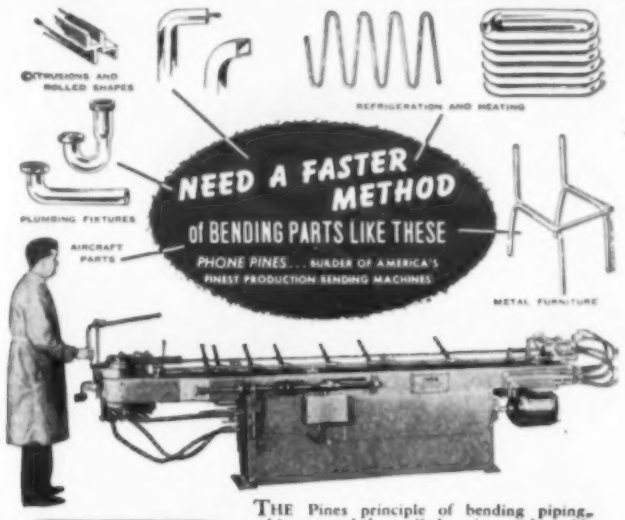
▲ For more details circle NED-591 F5 on enclosed inquiry slip ▲

FORK LIFT TRUCK
equipped with torque converter



Fast, smooth operation in line of fork lift trucks is provided by Towmotorque torque converter type transmission. Clutch and need for shifting are eliminated. Creep - Control feature permits operator to "inch" the machine smoothly while maintaining high engine speed for full-power lifting, mast tilting or hydraulic accessory operation. Forward or reverse can be preselected while truck is in motion. Momentary stopping of truck is possible without operating transmission controls. Made by **Towmotor Corp.**, 1219 E. 152nd St., Cleveland 10, O.

▲ For more details circle NED-592 F5 on enclosed inquiry slip ▲



COST CUTTING FEATURES OF PINES BENDERS

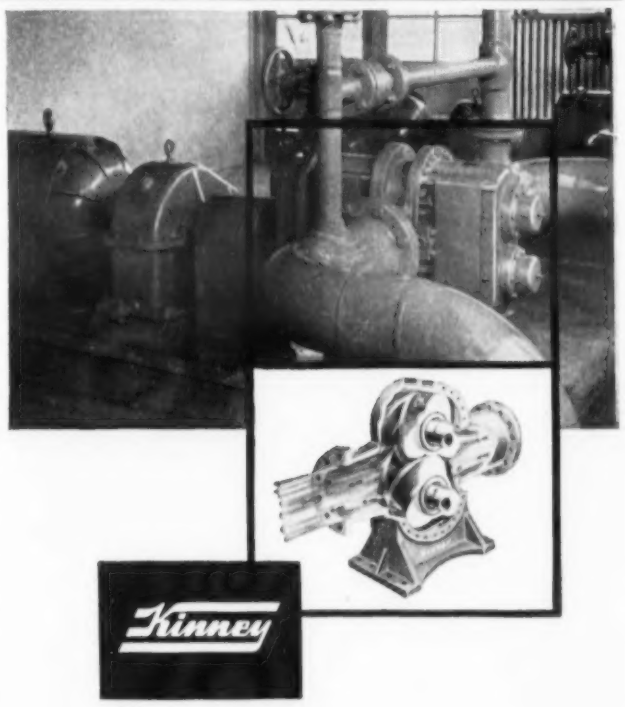
- Produces Accurate Uniform Bends without marking or distorting.
- Push-Button Control — simple, easy for one man to operate.
- Highly Versatile — handles wide variety of work — serpentine, coil, compound or multiple bends.
- Fast Set-Ups — tool changes in 10 minutes.
- Superior Design — tapered alloy-steel spindle, adjustable gibs, Timken bearings, Vickers pump

THE Pines principle of bending piping, tubing, extruded or rolled sections and mouldings, employes tested and proven methods that assure best results and peak production. Roll, compression, draw, and stretch bending methods are skillfully adapted to best suit your material and product needs. Hydraulic power, push-button control and automatic operation is combined to assure high efficiency and lower production costs. Ask Pines to analyze your bending problems now.

WRITE FOR FREE LITERATURE
Find out how the Pines Benders are designed to save time and cut costs. Literature describes and pictures various models, attachments, and methods on actual jobs.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery 699 WALNUT • AURORA, ILLINOIS
PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

▲ For more details circle NED-593 F5 on enclosed inquiry slip ▲



Pump Maintenance is BUILT OUT of this picture

You are looking at a Kinney Model HQA Heliquad Rotary Pump in refinery service — the best in positive displacement pumping for continuous, non-pulsating delivery of all viscosities from aromatics to heaviest crudes. Where maintenance-free performance is essential (fuel oil transfer, for example) you can't beat a Kinney HQA Pump. Because its bearings and timing gears are external to the pumping chamber and there's no metal to metal contact of the working parts, this pump is practically indestructible.

Kinney has the right rotary pump for your job. Heliquad Pumps are available in iron, steel, or bronze constructions, with displacements from 20 to 2700 GPM — for pressures to 300 psig, (temperatures to 650°F. and above depending upon size of pump and type of liquid.) Send today for complete details. Kinney Manufacturing Division, Boston 30, Mass. District offices in Boston, New York, Philadelphia, Cleveland, Chicago and Los Angeles.

KINNEY MFG. DIVISION
THE NEW YORK AIR BRAKE COMPANY
3612 WASHINGTON STREET • BOSTON 30 • MASS.

☐ Please send Bulletin L51 describing the complete line of Kinney Liquid Pumps.

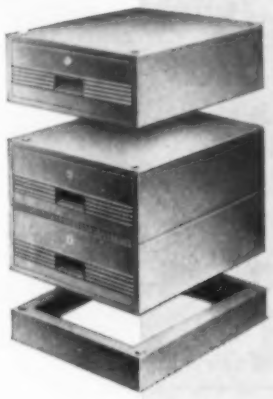
Name .....
Company .....
Address .....
City ..... State .....

▲ For more details circle NED-594 F5 on enclosed inquiry slip ▲

specify standard

HALLOWELL

DRAWERS and DRAWER TIERS



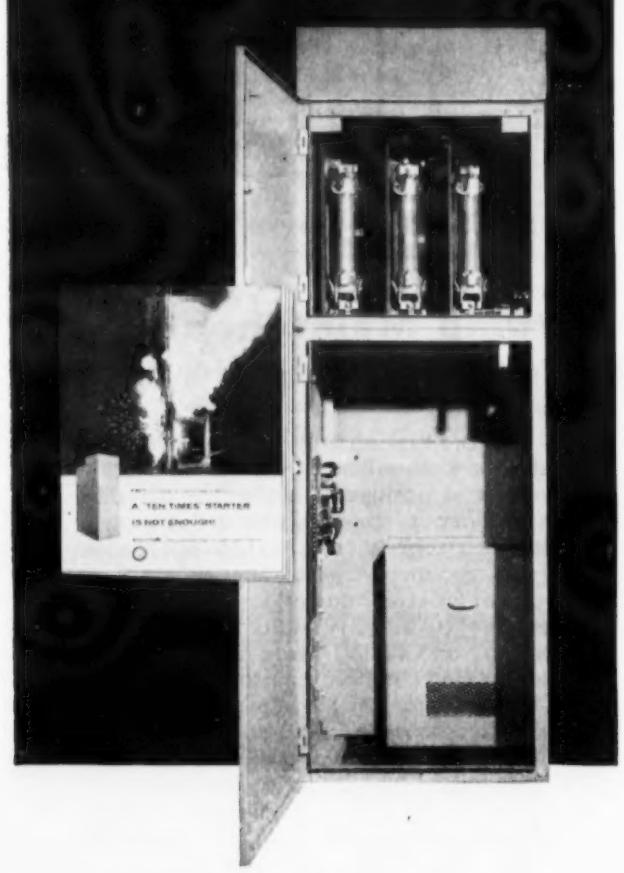
HALLOWELL FEATURES
- 3 drawer sizes—all standard—glide on roller bearings
- Welded throughout
- Recessed handles
- Baked-on enamel finish

Standard drawers and drawer tier units—all steel and interchangeable—permit you to *custom-build* work areas and storage space quickly and inexpensively to fit your requirements. Stocked by leading shop equipment dealers. Write for literature. STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

HALLOWELL SHOP EQUIPMENT DIVISION sps JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-595 F5 on enclosed inquiry slip ▲

Want more facts on industry's newest high-voltage starter?



The new line of Westinghouse high-voltage fused starters features extension of BAL fuse line to 400 amperes—new air break contactor—new enclosures and many more important design advances.

For all the facts on this outstanding new starter, send for free booklet B-6535 or, for a demonstration of the facts, contact your Westinghouse sales engineer—*The Man With The Facts.* J-21899

YOU CAN BE SURE...IF IT'S Westinghouse

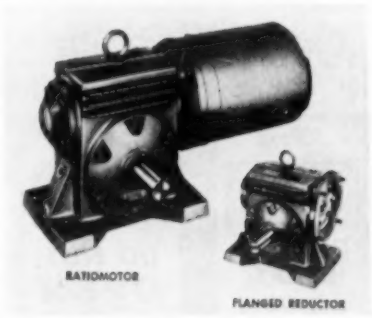
▲ For more details circle NED-596 F5 on enclosed inquiry slip ▲

MACHINE WORK METER
checks output of motor driven units

This Workometer measures the units of work consumed by the driving motor of machines. Work units recorded are a measure of the operator's efforts. Meters are available for use on machine tools, production machines, high-cycle tools and arc welders. Data collected can be used for operator comparison and evaluation, cutting tool efficiency evaluation, establishing and maintaining work standards, cost accounting and similar operations. Meters are offered on a rental basis which includes recommendations, installation, inspection and sealing. Write to **Stewart Instrument Co.**, Dept. N, 6507 Grand River Ave., Detroit 8, Mich.

▲ For more details circle NED-597 F5 on enclosed inquiry slip ▲

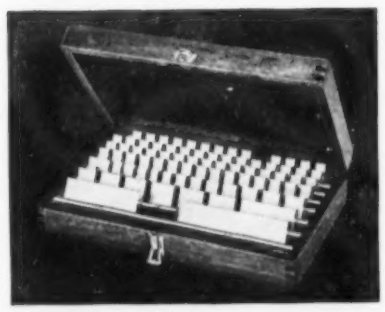
MOTORIZED SPEED REDUCERS
in ratios from 10:1 to 3600:1



Combination construction of 100 series Ratiomotors permits removal of motor at any time without disturbing gear reduction unit. These standard stock motorized gear reduction units are also available without motor as flanged reducers. The 28 stock models which make up the series comprise 194 different motorized units, with general-purpose or totally-enclosed motors in 13 different sizes from 1/6 to 10 hp. Ratiomotor gear units less the motors are available in the same range with ratios from 10:1 to 3600:1 and output torque ratings from 50 to 9400 lb in. Made by **Boston Gear Works**, 69 Hayward St., Quincy 71, Mass.

▲ For more details circle NED-598 F5 on enclosed inquiry slip ▲

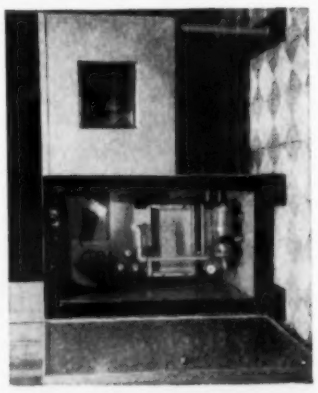
GAGE BLOCKS
set consists of 81 blocks



F-81 gage block set consists of 81 alloy steel blocks which produce approximately 240,000 different gages in 0.0001 - in. steps, ranging from 0.200 to beyond 12 in. Sets are available in chrome plate and steel, and protective end blocks are available in tungsten carbide. Company also operates service which inspects, removes imperfections and restores accuracy to gage blocks. Made by **Freeland Gauge Co.**, 9938 Freeland Ave., Detroit 27, Mich.

▲ For more details circle NED-599 F5 on enclosed inquiry slip ▲

TEMPERATURE-HUMIDITY CABINET
for testing materials and equipment



Relative humidity is controlled to close tolerances in range of 5 to 95 per cent in this air conditioned test cabinet. Dry-bulb temperature at which this control is provided is dependent on the collateral services afforded. With simple water and electric power, the top temperature is 150° F and the low limit depends on the available water temperature. When refrigeration is provided, Niagara No Frost liquid can be used in the spray water and the dew-point temperature can be taken as low as −30° F. Cabinet dimensions are 30 x 28 x 24 in. Made by **Niagara Blower Co.**, Dept. E. D., 405 Lexington Ave., New York 17, N. Y.

▲ For more details circle NED-600 F5 on enclosed inquiry slip ▲

SNAP-ACTION THERMOSWITCH® UNITS...

accurate under higher electrical loads

Two new *snap-action* Fenwal THERMOSWITCH Units:

1. Fenwal's Series 511 — *remote* bulb and capillary type control is rugged, dependable and fast — adaptable wherever industrial processes involve air, gases and solids. In two temperature ranges (60° to 250°F and 200° to 550°F) with a setting accuracy of ±3% of full scale. Rated at 35 amps., 125V A.C., 25 amps., 250V A.C.

2. Fenwal's Series 20,000 — *local* liquid-filled, snap-action unit for precise, on the spot temperature control. Shell, sensitive over most of its area, picks up finite temperature changes fast. Standard temperature ranges from 70° to 300°F and −50° to 200°F. On special order, ranges within −100° and 300°F may be supplied. Safely adjustable. Rated at 15 amps., 125 or 250V A.C., 60 cycles.

FREE data bulletins *now* on both. Fenwal engineers will discuss your temperature control or detection problem on request. **Write to Fenwal Incorporated, 86 Pleasant St., Ashland, Mass.**

Fenwal THERMOSWITCH®
Controls Temperature...*Precisely*

▲ For more details circle NED-601 F5 on enclosed inquiry slip ▲

HOLLOW BORING *and* DEEP HOLE DRILLING *Specialists*

Save production time and money on your deep hole parts with our specialized service.

- HOLLOW FORGINGS
- HOLLOW BARS
- CYLINDERS
- CONTRACT HONING
- CONTRACT DRILLING

Send your prints for estimates or recommendations.

Write or Wire

HOLLOW BORING CORPORATION
85 Prescott Street
WORCESTER, MASS.

▲ For more details circle NED-602 F5 on enclosed inquiry slip ▲

You can make BIG SAVINGS with Falk All-Steel Shaft Mounted Drives

SIX SIZES
- ½ to 30 hp
- Single or double reduction
- Wide output speed range—420 to 10 rpm

•The rugged, compact, all-steel Falk Shaft Mounted Drive is the ideal answer to countless application problems requiring dependable speed reduction in limited space. It mounts in any position directly on the driven shaft. Its precision helical gearing gives highest mechanical efficiency. No adjustable motor bases or slide rails are needed. Exclusive advanced design permits inspection of gears without dismantling unit from driven shaft or disturbing revolving elements. This versatile, economical reducing unit saves space, power, material and time—its applications are virtually unlimited.

SEND FOR FREE BULLETIN!
Let us send you our illustrated Bulletin 7101; it describes the structural and practical advantages of this all-steel Shaft Mounted Drive—and contains selection tables, application photographs and a wealth of helpful information. Write The Falk Corporation, 3043 W. Canal St., Milwaukee 8, Wisconsin.

FALK
...a good name in industry

▲ For more details circle NED-603 F5 on enclosed inquiry slip ▲

New FLOORMOBILE keeps plants cleaner, safer and cuts costs!

Floormobile suction cleans 20M sq. ft. of floor per hour.

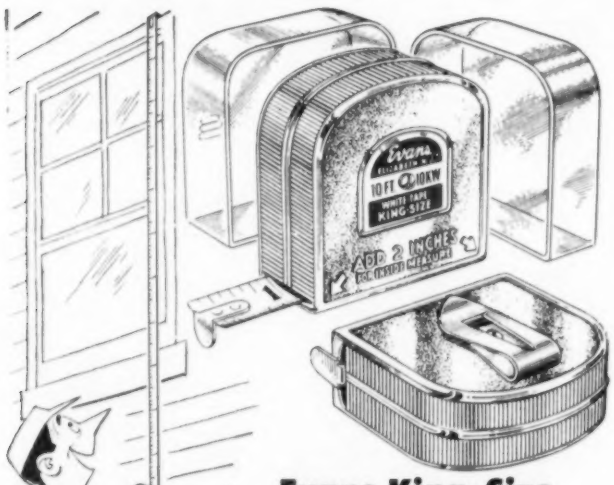
FLOORMOBILE is a powerful, mobile floor cleaner that sucks up dust, dirt, string, paper, trash and other materials . . . some impossible to pick up with other methods. The Plantman FLOORMOBILE suction cleans up to 20,000 sq. ft. an hour. It doesn't stir up and chase dust around as brooms or ordinary sweepers do. But on the contrary, it *sucks up* the dust and keeps it out of the air. Less airborne dust means fewer germ-laden dust particles and less absenteeism; less cleaning of fixtures, motors, wires, work in process and finished stocks; and less explosion and fire hazards.

Reports from users show you can clean large floor areas faster, easier, better . . . *and control dust* . . . with the Plantman FLOORMOBILE. One company using 5 FLOORMOBILES reports direct labor savings in excess of $30,000 per year; another company has reduced man hours devoted to dust control by 72%; still another with 2 FLOORMOBILES cleans three floors in the time it formerly took three men to clean one floor.

Send today for brochure and complete information showing how Plantman FLOORMOBILE can keep your plant cleaner, safer and cut costs.

Write Handling Devices Co., Inc., 45 Pearl St., Brookline 46, Mass.
—Advt.

▲ For more details circle **NED-604 F5** on enclosed inquiry slip ▲



Evans King-Size 10-ft. Steel Tape

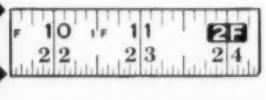
STANDS UP STRAIGHT for UPRIGHT MEASUREMENTS

Those long upright measurements are easy and accurate with this new EVANS King-Size 10-ft. White-Tape. The 33% wider blade (full ¾") stays straight up without bending or buckling. You get a *free* belt clip and Tenite utility case with every tape. Sliding end hook for inside or outside measuring and . . .

it's marked so you don't have to figure! no other tape is marked this Evans way.

This Edge—marked in feet and inches with foot markings at every inch.

This Edge—marked in inches from 1" to 120"



Whichever way you work, in inches or feet and inches, you read *instantly* without having to stop and figure.

The EVANS King-Size White-Tape Is the Top 10-ft. Tape value at only $2.39. Purchase from your supplier.

another EVANS value—

THE ONLY 12-FOOT POCKET WHITE-TAPE

"Standard blade ½" wide"

This L-O-N-G-E-R Pocket White-Tape only $1.89

Purchase from your supplier.

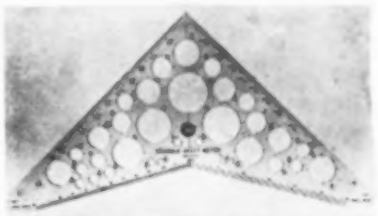
Now, a pocket steel tape that measures a full 12 feet—eliminates the inconvenience and inaccuracy of adding two measurements as you do with shorter tapes. Exclusive EVANS double markings (same as King-Size above). Chrome plated case is *no bigger than cases for shorter tapes.* Self-adjusting sliding hook for 100% accurate inside or outside measurements. Each tape packed in FREE transparent Tenite utility case. **Free Sample Tape Available If your distributor does not carry these EVANS Tapes, have your purchasing agent write direct to the factory giving the name of his distributor and requesting a free sample tape. Specify whether 12 ft. L-O-N-G or King Size Tape is wanted.**

Evans & CO.

400 Trumbull Street, Elizabeth, N. J., U. S. A.

Makers of Evans "Long Tapes"—25-50-75-100 ft. and Evans 6-ft. Folding Rules

DRAFTING INSTRUMENT
triangle, protractor, letter guide



Many functions can be performed with the Triangle - Draft Meter, a precision drafting instrument made of 0.075-in. acrylic vinyl plastic. It combines a 10-in. 45-90-degree triangle, combined 30 and 60-degree angles, 10-in. graduated protractor, accurate half-scale in 1/32-in. divisions and full scale in 1/16-in. divisions, lettering guide and circle template with 33 circle guides from 3/32 to 1½ in. Instrument's laminated graduations are sharp and clear and will not wear off. It has a center lifting knob and lettering guide spacers of ⅛, 5/32, 3/16 and ¼-in. Made by **Alvin & Co.**, Palisado Ave., Windsor, Conn.

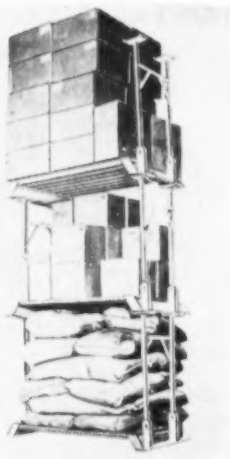
▲ For more details circle **NED-605 F5** on enclosed inquiry slip ▲

TELESCOPING LIFT TRUCK
raises 3000-lb loads 100 in. high

Loading, stacking and other industrial materials handling operations are facilitated with this Grand Standard telescoping Lift King fork or platform stacker. Powered by two 6-v storage batteries or 110-v electric motor, this machine will lift loads weighing up to 3000 lb from floor to heights of 100 in. It is equipped with 8-in. Texit roller-bearing wheels and floor locking device. Distributed by **Allied Mfg. & Sales Co.**, Dept. 2-3A, 3113 W. Grand Ave., Chicago 22, Ill.

▲ For more details circle **NED-606 F5** on enclosed inquiry slip ▲

PALLET LOCKING DEVICE
makes stacked units more rigid



Self-contained U-bolt locking device now incorporated in all Multi - Stak pallet stacker units and Dubl Duty wood pallet conversion kits locks the upright posts or standards into three contact points for safety and rigidity. Previously the U-bolt provided only two contact points. Standards can be locked for either temporary or permanent use. When U-bolts are released, standards on the Multi-Stak fold flat for compact storage, while on the Dubl Duty units the standards are removed. Made by **Elizabeth Iron Works, Inc.**, 508 Green Lane, Elizabeth B, N. J.

▲ For more details circle **NED-607 F5** on enclosed inquiry slip ▲

POWER HOG FUEL RAKE
fitted to traveling bridge crane

Designed to break down and move piles of hog fuel to conveyors that feed the boiler house, this traveling bridge unit is a hog fuel rake crane. Variously called a "devil's pitch fork" and a "back scratcher," unit operates in a 50 x 120-ft hog fuel storage building. Crane is 18 ft above the floor, and hydraulically operated rake covers a height range of 20 ft with a horizontal reach of 17 ft and a 7-ft stroke. Cab containing all controls, rotates through 280 degrees. Made by **Ederer Engineering Co.**, 2939 First Ave. S., Seattle 4, Wash.

▲ For more details circle **NED-608 F5** on enclosed inquiry slip ▲

FASTER!

MORE ACCURATE!

. . . *the* MATEER *Electric Filler*

1. **ONE FILLER** . . . handles liquids, powders, pastes.
2. **IT'S FASTER** . . . fills up to 240 containers per minute!
3. **IT'S ACCURATE** . . . 99.7%!
4. **IT'S EASY TO MAINTAIN** . . . all parts contacting materials can be taken apart, cleaned, replaced in 5 minutes!
5. **IT'S FLEXIBLE** . . . custom engineered to *your* needs—*one user fills 27 products* with 1 M.E.F.!

Ask for our new brochure "How Modern Is Your Filling Equipment?"

Write Dept. N6-55

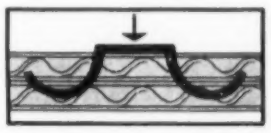
G. DIEHL MATEER CO.

Lincoln Highway, Stratford, Wayne, Pa.

▲ For more details circle **NED-609 F5** on enclosed inquiry slip ▲

LOOK! A SELF-CLINCHER!

No blade to insert!
Staple spreads itself under or inside the work!



Bostitch T5 Tacker → with outward clinch

Use it for stapling insulation around pipes and ducts . . . fastening shipping tags to corrugated containers . . . any job that calls for a blind clinch. By lightly pressing the handle you automatically drive a staple and turn its legs outward to clinch under or inside the work. Two models for light and medium staples. Call the Bostitch economy man in your area.

Fasten it better and faster with

For more information about the Bostitch T5 Tacker with outward clinch, write BOSTITCH, 686 Mechanic St., Westerly, R.I.

BOSTITCH®
STAPLERS AND STAPLES

▲ For more details circle **NED-610 F5** on enclosed inquiry slip ▲

It's NEW

REX NYLON TABLETOP

Long Life · Low Cost
Light Weight

Rex TableTop Chain . . . the original 2-piece flat-top conveyor chain, now available in Nylon. Runs without lubrication, lightweight, strong, quiet. Affords a smoother, practically gap-free surface for conveying cans, cartons, vials, and small parts. Mail coupon for your copy of the new Rex Nylon TableTop Bulletin.

REX CHAIN BELT COMPANY

Chain Belt Company
4686 W. Greenfield Avenue
Milwaukee 1, Wisconsin
Please send my Nylon Table Top Bulletin 55-65.

Name.....
Company.....*Dept.*.....
Address.....
City.....*State*.....

▲ For more details circle **NED-611 F5** on enclosed inquiry slip ▲

Cordomatic

AUTOMATICALLY CONTROLLED

DROP LIGHT REELS

13.95 20' Length 30' and 40' Lengths Slightly Higher Prices

A rugged and dependable piece of equipment that gives you light where you want it . . . when you want it.

★ Crack-proof phenolic pistol-grip handle includes the time proven LEVOLIER toggle-action switch and socket.

★ New type heavy duty, all steel, all chrome reflector with swing-open guard.

★ Heavy gauge steel casing . . . smartly styled with a strikingly new textured finish . . . grease and oil resistant and set off by gleaming chrome trim.

★ Underwriters' approved SJ Neoprene cord features a kink proof, moulded-into-core jacket construction . . . oil and water resistant.

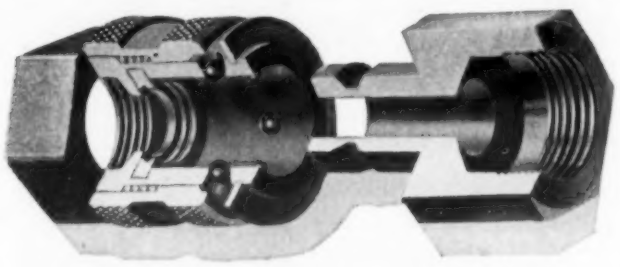
★ Fool-proof gravity action locking mechanism has nothing to break or jam.

★ The UNDERWRITERS' LABORATORIES INC. seal on CORDOMATIC DROP LIGHT REELS is your assurance of safety and dependability.

Cordomatic* DIVISION OF THE VACUUM CLEANER CORP. OF AMERICA

1724 INDIANA AVE., PHILA. 32, PENNA.

▲ For more details circle NED-612 F5 on enclosed inquiry slip ▲



QUICK-SEAL COUPLINGS

Couple or Uncouple IN ONE SECOND

Titeflex couplings are leakproof at *all* operating pressures—will convey liquids, gases or lubricants. These couplings save time, money—require no tools to connect or disconnect. Smooth bore construction means fast, free flow.

Titeflex Quick-Seal Couplings are made in three types—Straight-through, Single and Double Check-valves, in a variety of alloys and complete range of sizes from ¼" to 12" diameter.

Mail coupon TODAY for free Titeflex Quick-Seal Coupling Catalog.

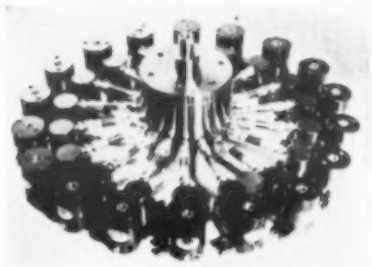
Titeflex

TITEFLEX, INC.
Industrial Products Division
507 Hendee Street, Springfield 4, Massachusetts
Please send my free copy of the Titeflex Quick-Seal Catalog. No obligation.

Name_____
Title_____
Firm_____
Address_____
City_____ Zone____ State____

▲ For more details circle NED-613 F5 on enclosed inquiry slip ▲

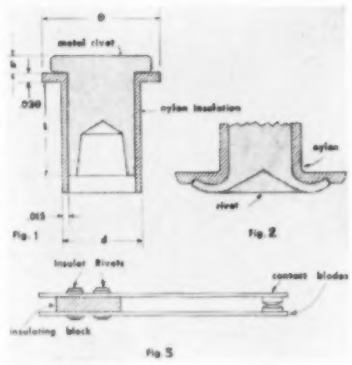
AIR CHUCK
has Brown & Sharpe type collet



Designed for use on dial indexing tables, the No. 000 air chuck uses a standard No. 00 Brown & Sharpe type collet. Holding power of this chuck is limited to four times line pressure because of its size. The compact 5-lb unit measures 5 x 3½ x 2⅞ in. and can be used with rotary valves, although suited for use on drill presses, milling machines, tappers and for light assembly. Series of chucks is shown arranged for fast multiple production with the rotary control valve in the center. Made by **Redmer Air Devices, Inc.**, P. O. Box 247-RV, Guntersville, Ala.

▲ For more details circle NED-614 F5 on enclosed inquiry slip ▲

INSULATED RIVETS
available in various metals



Shank and under-the-head surfaces of Insulet rivets are covered with a uniformly thick plastic insulation which can be nylon (standard), Kel-F, vinyl or other material. Rivets have flat heads, semitubular shanks and are offered in aluminum, brass, steel and other metals. Insulation color can be varied for color matching or coding. They are usable in electrical applications, for riveting to ceramic or glass where plastic acts as a shock absorber or in air tight or water tight joints. They are assembled with tools used in rolling other conventional tubular shank rivets. Various lengths and diameters are available. Made by **Pylon Co.**, P. O. Box 55-J, Attleboro, Mass.

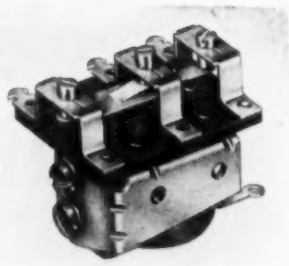
▲ For more details circle NED-615 F5 on enclosed inquiry slip ▲

PORTABLE LIGHT
magnetic base holds it in position

Handi-Light, a portable light for use in tool rooms, die shops, bench inspection, on machines and other uses, is equipped with two 5-in. fluorescent lamps. A plastic chip shield protects lamps from damage. Unit lights immediately and has a heavy duty flexible metal goose neck which permits directing light where desired. Plastic base contains two permanent magnets that attach to any flat or round ferrous surface. Control on base releases the light for repositioning. Handi-Light is also available with a four-power magnifier. Made by **Lufkin Rule Co.**, Hess St., Saginaw, Mich.

▲ For more details circle NED-616 F5 on enclosed inquiry slip ▲

MINIATURE RELAY
sensitive unit is adjustable



Factory-set to operate on 10 milliwatts, the SO type miniature relay can be adjusted by the user down to 2 milliwatts, or any desired pick-up or drop-out by means of fine screw contacts. It requires a space 1⅛ x 1 7/32 x 1¼ in., weighs 1½ oz and has a single-pole, double-throw contact arrangement. Life expectancy is 250,000 operations at a contact rating of 1.5 amp. Vibration resistance is 20 G at 10 to 55 cycles, or 5 G at 10 to 500 cycles. Standard coil resistances available are 4000, 6500 and 10,000 ohms. Units are available in open types, dust-tight and hermetically sealed enclosures. Made by **Advance Electric & Relay Co.**, 2425 N. Naomi St., Burbank, Calif.

▲ For more details circle NED-617 F5 on enclosed inquiry slip ▲

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Hand Operated • Foot Operated • 2-position Power Operated 3-position Power Operated • Solenoid Operated • 2 or 3-position Momentary Energizing • Continuous Energizing • Safety Energizing Exhaust to Neutral Cycle • Standard Cycle • Manual return to Neutral or Reverse • Spring return to Neutral or Reverse • Finger Pilots Cam Pilots • Air or Gas Pilots • Solenoid Pilots. Available in sizes from ¼" to 1¼" standard pipe connections.

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VALVE ACTUATORS
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Ledeen Mfg. Co.
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Los Angeles 15, Cal.

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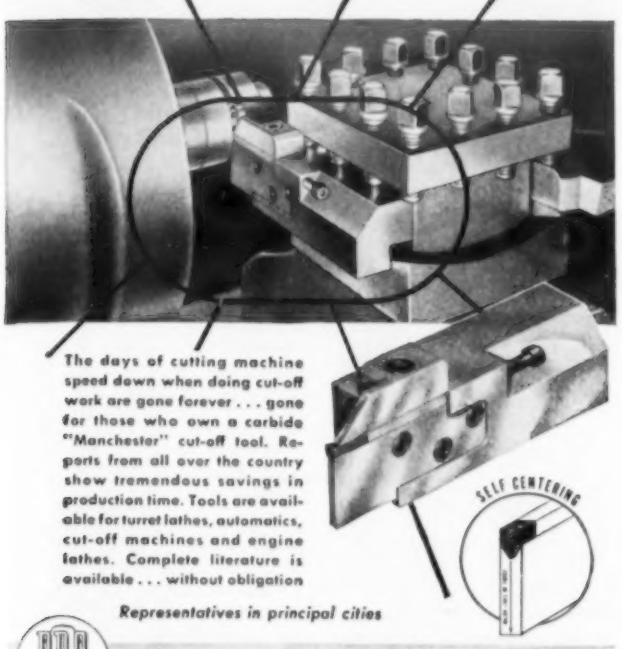
NOW YOU CAN CUT-OFF WITH CARBIDE AT *full* RATED CUTTING SPEED



The days of cutting machine speed down when doing cut-off work are gone forever . . . gone for those who own a carbide "Manchester" cut-off tool. Reports from all over the country show tremendous savings in production time. Tools are available for turret lathes, automatics, cut-off machines and engine lathes. Complete literature is available . . . without obligation

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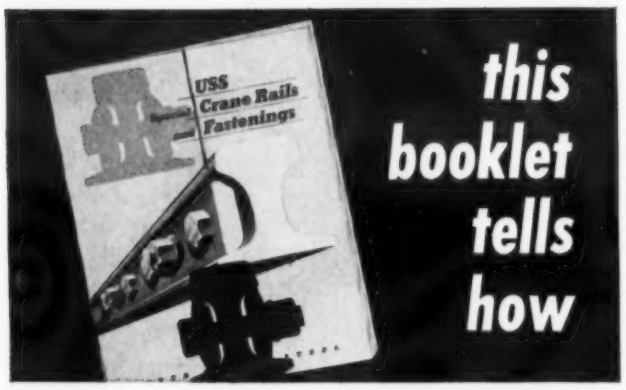
▲ For more details circle **NED-621 F5** on enclosed inquiry slip ▲

Keep cranes in service Cut maintenance costs



this booklet tells how

● This informative booklet on U·S·S Special Crane Rails and Fastenings can help you reduce crane and runway maintenance costs. It describes our three Special Crane Rail Sections—which were designed to give longer service under heavy wheel loads—and shows a special technique of tight-joint-assembly which, when combined with a new conception of "floating-rail" fastening, will result in fewer delays in crane operation and less maintenance expense.

To get your copy, just send your name and address to United States Steel Corporation, Room 4693, 525 William Penn Place, Pittsburgh 30, Pa.

U·S·S SPECIAL CRANE RAIL SECTIONS

UNITED STATES STEEL

▲ For more details circle **NED-622 F5** on enclosed inquiry slip ▲

CHANGE SPEED, TOOLS FASTER with EXCLUSIVE

Strandflex **4 & 5 speed**
GEAR DRIVE FLEXIBLE SHAFT MACHINES

ONE COMPACT UNIT, gear-shift selection of 4 or 5 speeds up to 12,000 RPM. Put one motor to work for GRINDING, ROTARY FILING, BRUSHING, SANDING, DRILLING, POLISHING, BUFFING, CLEANING.

4 & 5-SPEED Strandflex GEAR DRIVE eliminates countershafts, drive belts and pulley changes. You change speeds by little more than a flick of a finger . . . no need to use tools. QUICK-CHANGE COUPLING lets you change tools with a simple PRESS-PULL-SNAP action. FROM JOB TO JOB the unit can be moved easily on a wide variety of portable mountings. In use, the operator lifts only the lightweight handpiece, not the heavy motor.

NEW CATALOG describes FULL LINE of Strand Flexible Shaft Machines, including direct drive and countershaft models with up to 3 HP; also accessories and tools. See your distributor or write direct for Catalog C-210F.

FRANKLIN BALMAR CORPORATION
N. A. STRAND DIVISION *Strand*
Woodberry, Baltimore 11, Md.
5855 West Lawrence Ave., Chicago 30, Ill.

▲ For more details circle **NED-623 F5** on enclosed inquiry slip ▲

AUTOMATIC DRUM WARMER
has Fiberglas blanket insulation

Electric heating elements in this hinged type automatic drum warmer are recessed behind expanded metal screen for protection against spillage and other safety reasons. A 2-in. thick nonsettling Fiberglas blanket insulates the warmer. By using only radiated and convected heat, hot-spots are eliminated. Thermostat provides control against overheating and allows over-night operation to prepare drum contents for early morning use. Top of drum is accessible while warmer is operating. Sizes are furnished for 55 and 30-gal drums in all voltages from 115 v single phase to 460 v, three-phase. Thermostat ranges are 100 to 450° F and 60 to 250° F. Made by **Harold L. Palmer Co.**, Dept. NE-P-3, 2980 W. Davison Ave., Detroit 38, Mich.

▲ For more details circle **NED-624 F5** on enclosed inquiry slip ▲

WHITEPRINT DEVELOPER
takes material up to 24 in. wide

Tecnifax Dry Developer for ammonia-developing diazotype (whiteprint) materials is a compact 62-lb machine which accommodates material up to 24 in. wide. Operating speed is 6 fpm. Any ammonia-developing diazotype material exposed to arc or ultraviolet light in a vacuum frame, blueprint machine, diazo-moist printer or similar type of reproduction equipment can be transferred to this machine for development. Machine features Fiberglas cabinet, adjustable thermostat heat control and double evaporating tray. Made by **Tecnifax Corp.**, 5101 High St., Holyoke, Mass.

▲ For more details circle **NED-625 F5** on enclosed inquiry slip ▲

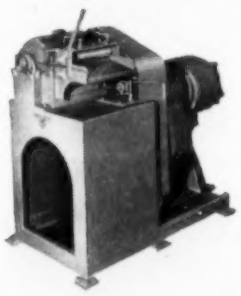
FLOOR MAINTENANCE MACHINE
15, 18 and 21-in. brush sizes

Motor - weighted 800 series floor maintenance machine with its attachments will wet and dry scrub, apply wax, polish, steel-wool, shampoo, disk-sand and grind. Balanced for easy operation, it is offered in 15, 18 and 21-in. brush diameters with General Electric dripproof capacitor type motors from ½ to 1 hp. Power is transmitted through a planetary drive which revolves brush at 172 rpm. Handle is adjustable. Made by **Finnell System, Inc.**, Dept. NED, 500 East St., Elkhart, Ind.

▲ For more details circle **NED-626 F5** on enclosed inquiry slip ▲

PLASTIC SHEET DICERS
in 6, 10 and 14-in. feed sizes

Plastic sheet up to ⅛-in. thick can be diced at lineal speeds up to 85 fpm by plastic sheet dicers offered in 6, 10 and 14-in. feed sizes. Stock is fed straight into notched-knife system, and perfect cube shapes are assured whether plastic is rigid or semisoft, or whether it is polystyrene, high-impact polystyrene, polyethylene or vinyls. Change in pellet shape is accomplished by change of knives; length is determined by lineal speed of flow. Rectangular dimensions of pellets can be varied from ⅛ x ⅛-in. to ½ x ½-in. Straight rather than notched knives are used for chopping extruded plastic rods. Made by **Mitts & Merrill, Inc.**, 67 McCoskry St., Saginaw, Mich.



▲ For more details circle **NED-627 F5** on enclosed inquiry slip ▲

Another new development using
B. F. Goodrich Chemical *raw materials*

FLYPAK® waste retainer manufactured for Waugh Equipment Co., New York by Davidson Rubber Co., Boston, Mass. B. F. Goodrich Chemical Company supplies only the Hycar rubber used in manufacture.

HEAT'S OFF HOT BOXES!

IN railroading there's a big price tag on delayed schedules, repairs, and derailments caused every year by freight car "hot boxes" . . . but a new device molded from Hycar American rubber takes the heat off the problem.

Before Hycar entered the picture, a jolt would often trap oil-soaked waste, cut off lubrication, and let friction get to work. Now a new waste retainer, with its comb-like projections, keeps the waste where it belongs.

Hycar meets the tough requirements of this job because it has exceptional resistance to grease, oil, abrasion, and extremes of temperature. There may be profitable applications of its outstanding properties in your own plant. For details write Dept. CH-3, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.

*T. M. Reg. U. S. Pat. Off.

B. F. Goodrich Chemical Company
A Division of The B. F. Goodrich Co.

Hycar American Rubber

GEON polyvinyl materials • HYCAR American rubber and latex • GOOD-RITE chemicals and plasticizers • HARMON colors

▲ For more details circle **NED-628 F5** on enclosed inquiry slip ▲

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FROM A NEEDLE . . . TO A TURBINE SHAFT
FASTER AND BETTER
WITH *LepeL*

HIGH FREQUENCY *Induction* HEATING UNITS

2½ KW INDUCTION HEATING UNIT
100 KW INDUCTION HEATING UNIT

• BRAZING
• HARDENING
• SOLDERING
• ANNEALING
• MELTING

The Lepel line of induction heating units represents the most advanced thought in the field of electronics as well as the most practical and efficient source of heat yet developed for industrial heating. With a background of half a century of electrical and metallurgical experience, the name Lepel has become the symbol for quality in induction heating equipment embodying the highest standards of engineering achievement, dependable low cost operation and safety.

If you are interested in the application of induction heating you are invited to send samples of the work with specifications of the operations to be performed. Our engineers will process these samples and return the completed job with full data and recommendations without any cost or obligation.

LEPEL Electronic Tube GENERATORS
1 KW; 2½ KW; 5 KW; 10 KW; 20 KW; 30 KW; 50 KW; 75 KW; 100 KW.

LEPEL Spark Gap Converters
2 KW; 4 KW; 7½ KW; 15 KW; 30 KW.

WRITE FOR THE NEW LEPEL CATALOG . . . . . .
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and cut your handling and warehousing cost!

here's an exclusive American feature

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When you "stack up" with American Tubular Storage Racks, you also "stack up" savings. The ingenious and simplified American feature, "erected without bolting or welding," has made them first choice with many businesses both large and small. American Racks are designed to meet practically every storage need. Send for catalog and get the facts on American before you buy any type of rack.

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AMERICAN METAL PRODUCTS CO.

STORAGE RACK DIVISION
5959 Linsdale • Detroit 4, Michigan

▲ For more details circle NED-631 F5 on enclosed inquiry slip ▲

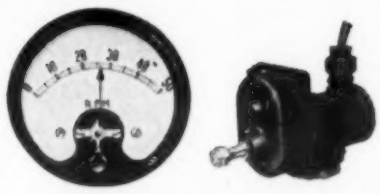
CUTOFF BAND SAW
1/3-hp unit has 6 x 11-in. capacity

Many features of a larger machine have been incorporated in small model A metal-cutting band saw which has a capacity of 6 x 11 in. These include rigid welded angle-iron legs, precision saw guides, adjustable cutting pressure and rate of descent, quick-action swivel vise and rotary blade brush. The ½-in. blade is offset from guide beam and has automatic shutoff. Overload protection is provided for ⅓-hp motor. With addition of table, saw can be used in vertical position for contour sawing, notching and slotting. Cutting speeds are 60, 90 and 120 fpm. Made by **W. F. Wells & Sons**, Dept. N, Three Rivers, Mich.

▲ For more details circle NED-632 F5 on enclosed inquiry slip ▲

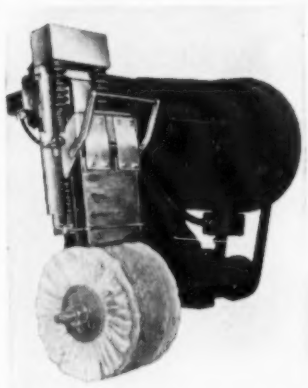
ELECTRIC TACHOMETER
for slow speed machinery

Designed for permanent installation, this small electric tachometer measures speed from very slow moving sources accurately within 1 per cent of maximum speed. It includes a model M-1200HA magneto and a choice of indicators. Magneto can be driven by coupling, gears or sprockets in such ratio that maximum speed of its shaft ranges from 10 to 50 rpm. Gear train with 20 to 1 step-up ratio requires a torque of only 20 oz-in. Voltage output of the magneto, proportionate to drive shaft speed, is registered on the indicator in any desired function of speed. Wide variety of dial sizes, length of scale arcs and calibrations is available. Made by **Electric Tachometer Corp.**, Dept. NE, 2218 Vine St., Philadelphia 3, Pa.



▲ For more details circle NED-633 F5 on enclosed inquiry slip ▲

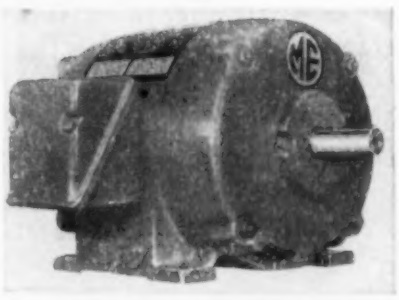
COMPOSITION APPLICATOR
applies compounds to buffing wheels



Adaptable to automatic or semiautomatic equipment as well as hand jacks, model 60 composition applicator is designed to apply all types of bar compounds and rouge to buffing wheels. It will hold any length bar and will feed 10 in. of compound in one setting. Power is provided by 1/20-hp, 115-v motorized reducer drive. A 220-v unit is optional. Made by **Packer Machine Co.**, 456-A Center St., Meriden Conn.,

▲ For more details circle NED-634 F5 on enclosed inquiry slip ▲

ELECTRIC MOTOR
integral horsepower type



Protection against splash, drip and weather and guarded construction are features of this integral horsepower motor, mountable in overhead, side wall or standard floor position. It has cast iron brackets and enclosed frame, screened openings and reinforced and milled feet. Three and single-phase ratings are available. Vinyl acetal resin on all conductors and Mylar phase separators provide maximum resistance to moisture. Winding is impregnated with silicone treated varnish. Motor is also available in totally enclosed, fan cooled design. Made by **Marathon Electric Mfg. Corp.**, E. Randolph St., Wausau, Wis.

▲ For more details circle NED-635 F5 on enclosed inquiry slip ▲

NEW OHIO CLIM-A-LONG PULLER

Easy to Carry From Job to Job

A 5-Ton Hoist with a 5 Foot Lift Weighing Only 59 LBS.

- Aluminum Alloy
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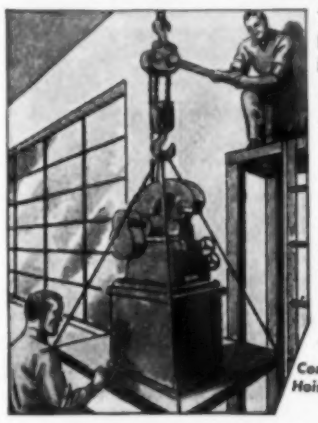
- Carries Regular Ohio Hoist Guarantee



The ONLY Portable Hoist Available Combining These FEATURES

- 5 Ton Capacity
- 2 Strands of alloy coil Chain
- Aluminum Alloy Construction
- Spur Geared
- Lever operated
- Safest—Mechanical Load Brake

Available in Capacities from 1 Ton

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THE Sutton MOTOR DRIVEN PRESSURE BLOWER

THREE SIZES ¼, ½, 1 H.P.

USE FOR
- EXHAUSTING DUST SMOKE FUMES VAPOR
- FORGE BLASTING

CONVEYING COTTON, WOOL, SHAVINGS
COOLING AND DRYING

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY. CENTRIFUGAL TYPE. Direction of discharge may be changed to any of eight 45 degree positions. Straight wall construction reduces windage and increases efficiency. Standard 3450 r.p.m. direct-connected 60-cycle ball bearing motor, open or totally enclosed types. Capacities, 100 to 800 cu. ft. per min. at static pressures from ½" to 6". Write for literature and prices.

Sutton *Manufacturing Corp.*
112 W. WILSON AVENUE NORFOLK, VIRGINIA

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. . . besides all these you get faster heating or cooling. Take advantage of the engineering assistance offered by Kold-Hold to help you with your heat transfer problems.

Send for complete technical manual and descriptive Bulletin No. P57.

PLATECOIL Division
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LANSING 4, MICHIGAN

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FIRMS IN YOUR AREA ARE SAVING MONEY WITH . . .

MagLiner MAGNESIUM
DOCK BOARDS

FOR RAIL OR TRUCK

Above you see a man putting down a sound investment for his company's future. This firm has installed a Magliner Dock Board engineered specifically for their dock conditions . . . equipment and loads . . . their operational requirements. The new Magliner will speed loading operations, eliminate safety hazards, and save valuable man hours.

A growing number of firms—many located right in your immediate area—have greatly reduced their loading costs with Magliner magnesium dock boards. You can too! Write today for your copy of DB-204 and the name of your local Magline representative. He will be pleased to acquaint you with nearby Magliner installations and the men who use them. Then judge for yourself!

Write Today for your Copy of DB-204

MAGLINE INC., P.O. BOX 56, PINCONNING, MICH.

In Canada: Magline of Canada, Limited, Renfrew, Ontario

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CALCULAGRAPH
figures elapsed time accurately

Reliable job time records are essential for compiling correct cost data, estimating reorders and checking on production efficiency. One sure way to secure accurate to the minute, dependable time costs is to use Calculagraph automatically-figured elapsed time records. Calculagraph gives you total elapsed time, starting and finishing time and date on a permanent, printed reference card. Eliminate losses due to inaccurate job time calculations by using Calculagraph to time your operations.

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CALCULAGRAPH COMPANY
SUSSEX STREET, HARRISON, NEW JERSEY

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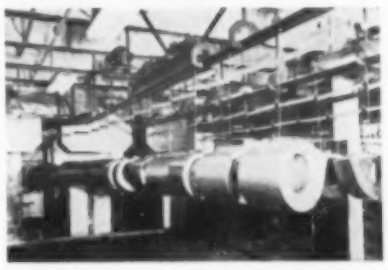
OVERHEAD CONVEYOR
steel rods connect trolley units



By conveying Janitrol furnace parts continuously through cleaning, painting and baking operations in the Surface Combustion Co. plant, this Landahl Chainless Conveyor has brought about marked reductions in finishing costs and sizeable increases in production. Conveyor (*NED May* '53) uses solid steel rods which pivot at both ends in ball and socket joints anchored within the trolley units. Installation requires no lubrication, eliminating drippage and making possible use of a burn-off oven for removal of mill oil. Horizontal or vertical short-radius turns are made without auxiliary traction. Speed can be regulated from 10 to 25 fpm and capacities range up to 100 lb per foot of conveyor line. Illustrated installation has trolleys on 2-ft centers, but other spacings are possible. Made by **Landahl Conveyor Co.**, 534 Dennison Ave., Columbus 8, O.

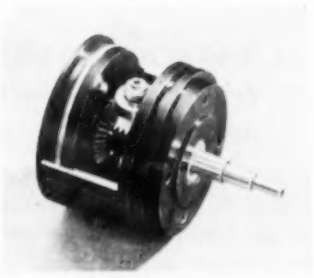
▲ For more details circle **NED-641 F5** on enclosed inquiry slip ▲

DRILLING & BORING MACHINE
0.15-in. capacity, 15,000-rpm speed

Swiss-built Posalux PEP 101 drilling and boring machine will drill deep holes accurately in steel and other hard materials. Feed is electro-pneumatically controlled and has accelerator for unproductive motion of spindle. Speeds up to 15,000 rpm and hole capacity from 0.004 to 0.15 in. make machine extremely useful for all sensitive drilling operations and as a replacement for a jig borer on medium production quantities. Distributed by **Carl Hirschmann Co.**, 30 Parkden Ave., Manhasset, N. Y.

▲ For more details circle **NED-642 F5** on enclosed inquiry slip ▲

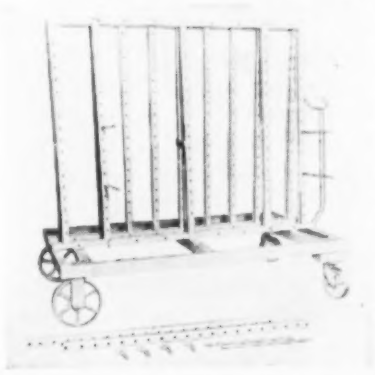
DIFFERENTIAL
small unit has concentric shafts



Output and both input shafts of model T750 single-end differential extend concentrically from one end of servo-mounted case. Design of the dust-proof unit which houses the differential facilitates mounting on a single hanger. Precision bearings and parts have low break-away torques and minimum backlash. Made by **Sterling Precision Instrument Corp.**, Instrument Div., Dept. NED, 34-17 Lawrence St., Flushing 54, N. Y.

▲ For more details circle **NED-643 F5** on enclosed inquiry slip ▲

ADJUSTABLE PEG-RACK CONVEYOR
handles castings, gears, costly items

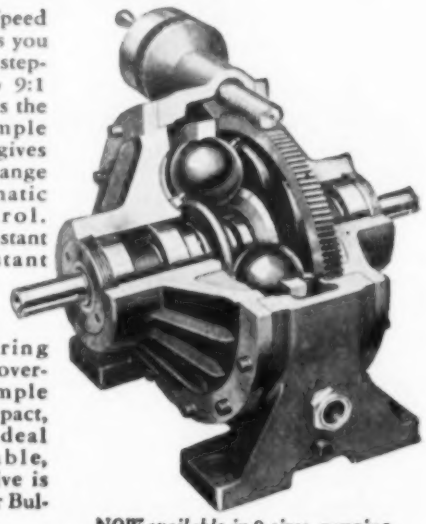


This peg-rack conveyor or truck is designed to handle safely such costly items as light metal castings, gears and diesel parts, as well as bulky or difficult-to-stack pieces. Various shaped products are supported by means of movable pegs positioned in series of vertical supports. Rigid and swivel casters make unit movable. Pegs are adjustable on 3-in. centers, while uprights are adjustable on 6-in. centers. Standard base measures 24 x 60 in. with 66-in. uprights. Available capacities are 1000, 2000 and 3000 lb. Made by **Rack Engineering Co.**, 168 Sixth St., Connellsville, Pa.

▲ For more details circle **NED-644 F5** on enclosed inquiry slip ▲

Get infinitely variable speeds with smooth, instant change

CLEVELAND Speed Variator gives you infinitely variable, stepless speeds up to 9:1 (from ⅓ to 3 times the input speed). Simple speed regulation gives instant, smooth change by manual, automatic or remote control. Available with constant torque or constant horsepower rating. No belts or complicated linkage. Ample bearing support to carry overhung pulleys. Simple construction, compact, quiet running. Ideal where dependable, variable speed drive is required. Write for Bulletin K-200.



NOW available in 9 sizes, ranging from one-half to 10 horsepower at 1750 input RPM.

THE CLEVELAND WORM & GEAR COMPANY
Speed Variator Division, 3283 E. 80th St., Cleveland 4, O.
Sales Representatives in all major industrial markets

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KEEPS 'EM ROLLING!

KESTER FLUX-CORE SOLDER available in 8 fluxes, all in 5 core sizes, assures you of getting a top quality product because of constant solder alloy control and consistent flux formulae. That's why you can depend on Kester to keep production rolling.

WRITE TODAY FOR Kester's NEW 78-Page Informative Textbook "SOLDER . . . Its Fundamentals and Usage."

KESTER SOLDER
COMPANY 4249 Wrightwood Avenue, Chicago 39, Ill.
Newark 5, New Jersey • Brantford, Canada

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ONE right driven speed for each and every job from the Heart of the Drive

This low-cost American Adjustable-Speed Sheave, the Heart of the Drive, gives you the *exact* driving speed you need at all times—for any operating condition. A simple screw adjustment changes the pitch diameter of the sheave to synchronize production lines or compensate for motor and belt drive variations. No pulley changing, no expensive transmissions, no lost time required to get speed changes of as much as 100%. No sheave freezing or fretting corrosion on the shaft. For food, chemical, textile, packaging—any industry where precise speed control is a must. Write today for new catalog. No obligation.

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Regular or Special Hardware

MADE TO SOLVE YOUR PROBLEMS

Now Stanley — hardware's first name for more than 100 years — is organized to provide industrial accounts with a complete hardware service from engineering to delivery. Send us your inquiries. Stanley has the facilities and experience to solve any problem you present involving hardware engineering, design or manufacture. Packed to suit your needs, and in the most economical manner.

Write the Industrial Hardware Division, The Stanley Works, 586 Lake St., New Britain, Conn. Send as much specific detail as you can. Our reply will be prompt.

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STANLEY Hardware
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HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL • STEEL STRAPPING

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It is now possible to include vacuum in your machine design. The Spencer unit is so small and light that it can be mounted underneath and inside your machine. It will provide vacuum to remove paper punchings or pick up metal chips, clean dies, or act as a chuck to hold materials down.

Hundreds of units are being sold for the above purposes. Our engineers will be glad to work with you to put your equipment way ahead of competition.

Ask for specific information for your machine.

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD

500-B

▲ For more details circle NED-649 F5 on enclosed inquiry slip ▲

NEW pocket size thickness gauge

ELCOMETER

Measures Non-Magnetic Coatings with ± 5% ± .0001" Accuracy

ELCOMETER measures thickness of porcelain enamel, paints, platings, foils, glass, paper, plastics, and other non-magnetic coatings quickly and accurately. Gauges flat or curved surfaces and hard-to-get-at spots easily. Needle locking device assures correct reading every time. Complete with tough leather case containing inner pocket for test strips. Weighs only 6 oz. Completely self-contained. Retail price: $68.00, F. O. B. Cleveland.

WRITE FOR ILLUSTRATED FOLDER

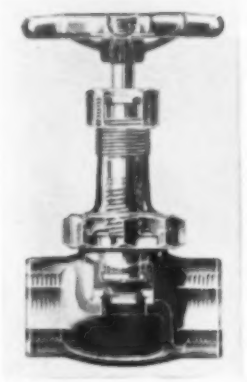
FERRO

FERRO CORPORATION

4181 East 56th St. • Cleveland 5, Ohio

▲ For more details circle NED-650 F5 on enclosed inquiry slip ▲

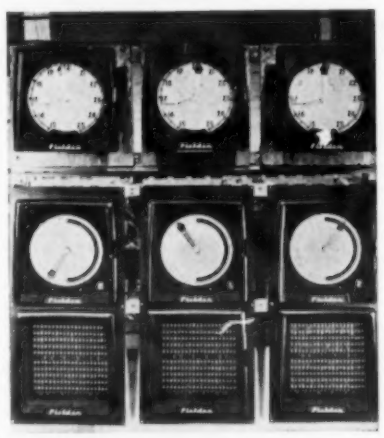
BRONZE GLOBE VALVE
seating metal resists wear



Exceedingly high performance life of LQ600 bronze globe valve is made possible by combination of two new elements, the first of which is the Brinalloy seating metal. Alloy is hardened all the way through and reportedly resists wear and corrosion more than 500 Brinell stainless steel. Second element is this valve intended for throttling service is flat-seat design made possible by Brinalloy seats and disks. These do not require replacement, renewing or regrinding. Other features are Stemalloy stem, high strength bronzes used in body and bonnet and true back-seating, permitting easy repacking under pressure. Made by **Lunkenheimer Co.**, P. O. Box 360-KK, Cincinnati 14, O.

▲ For more details circle NED-651 F5 on enclosed inquiry slip ▲

INDICATING SCANNER
monitors process variables



Continuous testing and controlling an unlimited number of industrial processes from a single point is possible with an indicating scanner. It monitors a variety of process variables involving level, temperature, thickness, mechanical movements, tolerances, weight and pressure. Steps numbering 6, 12, 24, 48 or more can be checked. Speed of scanning depends upon number of points to be checked, with a maximum rate of one point per second. Where there is a process that strays beyond a preset control zone the scanning stops at that point and actuates an alarm or flashes a signal. The indicator dial shows the extent of deviation. Associated control systems can be used to correct the condition automatically. Made by **Robertshaw-Fulton Controls Co.**, Fielden Instrument Div., 2902 N. Fourth St., Philadelphia 33, Pa.

▲ For more details circle NED-652 F5 on enclosed inquiry slip ▲

ALL-PURPOSE LOADER
transports hard-to-handle products, has 10,000-lb load carrying capacity

Versatility of the Cary-Lift all-purpose loader enables it to be used for loading and unloading jobs as well as transporting hard-to-handle products such as

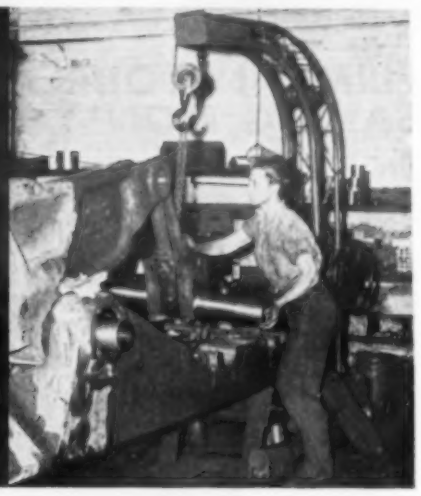
pipe, lumber, poles, construction materials and equipment. Machine can extract itself from mud, sand or snow, as well as operate over unpaved, soft terrain. It will handle dirt or aggregates with 1-yd and 4-yd slip-on buckets, or with scoop or bottom-dump buckets interchangeable with the forks.

Fork can be tipped down 81 degrees and up 27 degrees from ground level position. It can be raised to 13 ft 11 in., or lowered 1 ft below ground level. With lift arms extended, fork reaches 11 ft 2 in. at 7 ft 5 in. This model will handle 10,000-lb loads. Swivel clam model can swivel 360 degrees, while sling model handles loads up to 14,000 lb. Super Sling unit features maximum reach of 16 ft 2 in.

All units have large flotation tires, spring-mounted chassis, four-wheel drive, two or four-wheel booster steering and four-wheel hydraulic brakes. Each is powered by heavy-duty industrial engine coupled with truck-type transmission and differential system. Made by **Pettibone Mulliken Corp.**, 4701 W. Division St., Chicago 51, Ill.

▲ For more details circle NED-653 F5 on enclosed inquiry slip ▲

This Man is doing the work of SIX



One man and a CANTON crane can do the work of SIX men in lifting and transporting loads up to 3 tons *anywhere* in your shop. Welded steel laced housing on sturdy steel tube base affords great strength with light weight. Self locking worm mechanism holds the load at any point. Made in eight sizes with single or double cable operation.

The HILL ACME Co.
"CANTON" DIVISION
6404 Breakwater Ave. • CLEVELAND 2, OHIO

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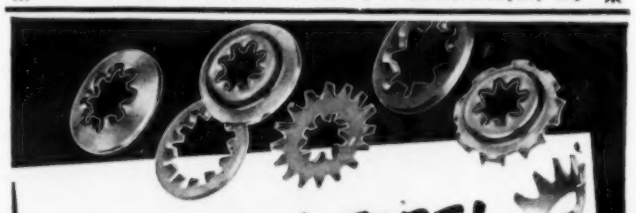
PERMACEL 32
COLORED PLASTIC TAPE

PERMACEL® TAPES

Find out how you can use self-sticking tape . . . write Permacel Tape Corporation, New Brunswick, N. J.

▲ For more details circle NED-655 F5 on enclosed inquiry slip ▲



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DIVISION OF ILLINOIS TOOL WORKS
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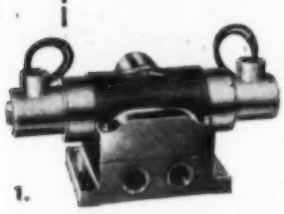
MV CONTROL VALVES

Easier to apply... Compact, versatile; choice of 3 mountings and 7 manual, solenoid, cam or pilot operating means for pneumatic, hydraulic systems to 200 p.s.i.

Easier to install... Sub-base, console and panel, or conventional piped mountings available. Made in 3/8", 1/2", 3/4" and 1" NPT port sizes.

Easier to service... Only moving part is one-piece spool carrying all moving seals which are standard "O" rings stocked by industrial supply houses; replaceable in minutes—no springs or retainers.



1.

Don't lose time and money with misfits or specials when a stock MODERNAIR MV valve will do your job. Modernair valves, cylinders and parts are stocked in principal U.S. and Canadian cities, and at factory. For prompt delivery, call your authorized dealer or write us now for specifications and prices.

4-way double solenoid MV is only 9 3/4" x 3 1/2" x 2 5/8" overall (1/2" NPT ports); handles to 150 p.s.i.

Modernair CORPORATION

ROOM 68 400 PREDA ST. • SAN LEANDRO, CALIF.

For more details circle NED-657 F5 on enclosed inquiry slip

Paltier RACKS

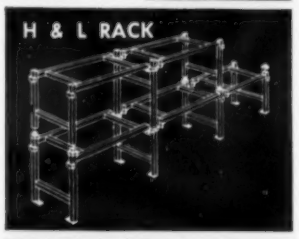
WITH THESE SPECIAL FEATURES

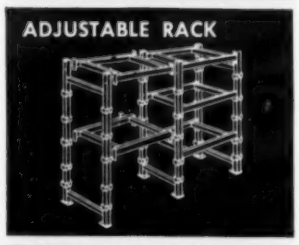
- EASY, SIMPLE INSTALLATIONS
- EASY TO KNOCK DOWN AND MOVE
- NO BOLTS, NO HAMMERS, or other tools needed to install.
- It has been said "one man and a fork truck can easily set up the H & L Rack without tools."
- Besides the many plus features incorporated into the H & L Rack it is priced to meet ordinary rack competition.
- Designed and manufactured to any load capacity or size.

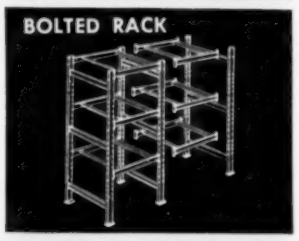
OTHER RACKS WITH SPECIAL FEATURES FOR EVERY USE AND APPLICATION.

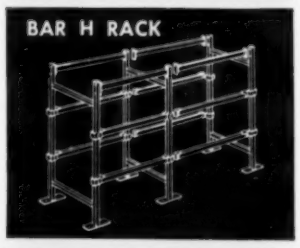
THERE ARE NO STANDARDS

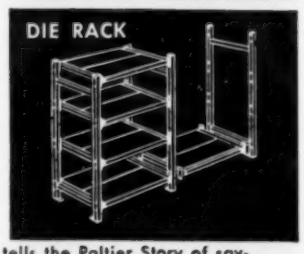
We design and build to your particular requirements. Furnished with either wood or steel decks.









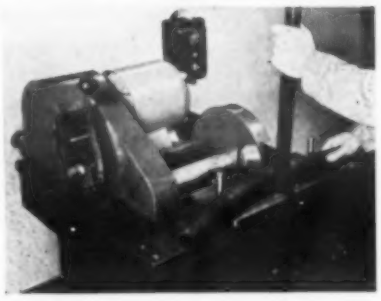


This booklet tells the Paltier Story of saving storage space. . . . Ask for it today!

THE PALTIER CORP.
1705 Kentucky St., Michigan City, Ind.

For more details circle NED-658 F5 on enclosed inquiry slip

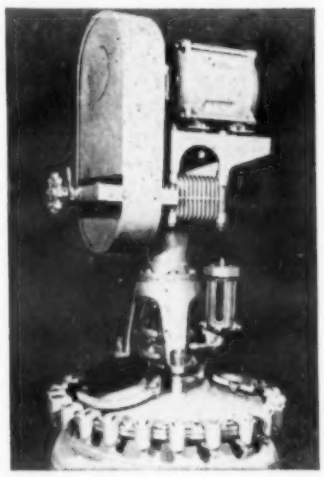
HOSE CUTTER-SKIVER
speeds fabrication of hose assembly



Speedy fabrication of hose assemblies is made possible by model 1149-12 motor-powered cutter-skiver designed for cutting hydraulic wire braid hose, either cotton or rubber covered. With latter, outer layer of rubber is removed for assembly of hose with reusable Hoze-lok fittings. The 10-in. diameter belt-driven cutting wheel is high speed steel. Skiving wheel, mounted on motor shaft, embodies high grade wire brush which removes rubber cover to predetermined length without injury to wire braid. Machine handles 1/4 through 2-in. ID high-pressure double-wire-braid hose as well as low pressure single-wire-braid types. Made by **Parker Appliance Co.**, Tube & Hose Fitting Div., Dept. NE, 17325 Euclid Ave., Cleveland 12, O.

For more details circle NED-659 F5 on enclosed inquiry slip

AGITATOR DRIVE
rotation variable from 60-300 rpm



Wide variety of materials can be processed with the model PW agitator drive, available for reactors up to 100 gallons capacity. Speed can be varied by changing sizes of constant speed V-belt sheaves or with variable pitch sheaves manually adjustable to give rotations ranging from 60 to 300 rpm. Speed reducer gears are rated to carry up to 3.6 hp at 175 rpm. Antifriction tapered roller bearings are used in both worm and gear shafts. Drive can be used with glass lined or stainless steel reactors. Overall height with stuffing box is 2 ft 9 in. or 2 ft 6 in. with rotary seal. Weight is 116 lb. Made by **Pfaudler Co.**, Dept. NED-2, 1000 West Ave., Rochester 3, N. Y.

For more details circle NED-660 F5 on enclosed inquiry slip

Electrical Conductors

Philadelphia Tramrail Co.—Design data for the best location of current conductors are presented in 8-page illustrated bulletin 7100. Detailed are typical assemblies for various types of conductors for crane runways and monorail systems incorporating an electric hoist. Current collectors, insulators, cable reels and trolley duct are described.

For more details circle NED-661 F5 on enclosed inquiry slip

Safe, sure Banding for Long Distance Shipping

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ALLEGHENY STEELBAND COMPANY

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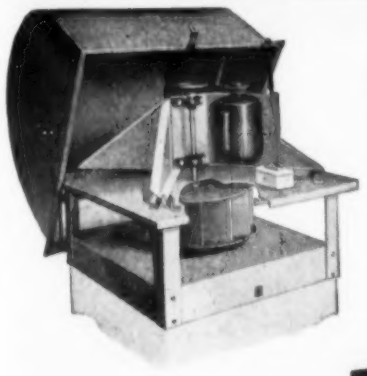
For more details circle NED-662 F5 on enclosed inquiry slip

For more details circle NED-663 F5 on enclosed inquiry slip



Give your ventilation a quiet lift with Airlift

(Swartwout's duct ventilator)

FEATURES:

- Certified ratings
- Non-overloading fan wheel
- Lower fan tip speed
- Oversize outlet opening
- Lowest noise levels

Centrifugal type fan in Swartwout-designed ventilator provides powerful efficient exhaust against static pressure; operates at low noise levels. Write for Bulletin AL-C.

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The Swartwout Co.

Roof Ventilators and Ventilating Louvers

POWER PLANT EQUIPMENT • PROCESS INDUSTRY CONTROLS

For more details circle NED-664 F5 on enclosed inquiry slip

NoDrip® ...STOPS CONDENSATION DRIP

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NoDrip plastic coating is easily applied to tanks, containers, suction lines, vats, pipes, walls, ceilings, etc. NoDrip adheres to metal, concrete, brick, plaster. It forms a seamless 100% moisture-proof covering that is effective as soon as dry. Acid, alkali and brine resistant.

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For more details circle NED-665 F5 on enclosed inquiry slip

Hoist
A HALF TON WITH THE POWER OF YOUR TRUCK BATTERY

Cut your receiving and delivery costs with this low priced versatile hoist that pays for itself in a few short months. Consumes a minimum of current from regular truck battery. Interchangeable from truck to dolly in moments.

Write factory for illustrated literature and further information.

BURTCHAELL HEATING CO.
HOIST DIVISION: 2944 S. E. Powell · Portland 2, Oregon

For more details circle **NED-666 F5** on enclosed inquiry slip

NOELTING **Faultless** ENGINEERED **TRUCK CASTERS** CUT HANDLING COSTS

300 Series Double Ball Bearing Swivel Plate Caster with Steel Wheel

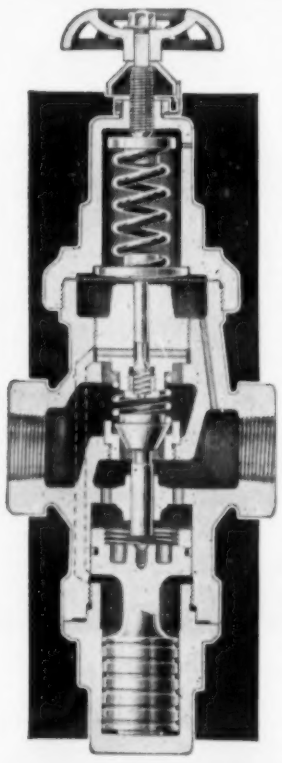
NEW! DRAWN STEEL WHEELS FOR LONGER WEAR

Faultless Casters equipped with the new Drawn Steel Wheels provide (1) *longer life,* (2) *greater efficiency,* (3) *at minimum maintenance* and, thus, (4) *lower operating cost per mile.*

Faultless Steel Wheel Casters help industry reduce overhead by maintaining fast, fluid production lines. These precision-made wheels are machined to tolerances typical of fine tools and like any quality equipment, are the best investment for long uninterrupted service. Write for Bulletin

FAULTLESS CASTER CORPORATION
Dept. NE-9, Evansville 7, Indiana
Branches in Principal Cities—Canada Factory: Stratford, Ont.

For more details circle **NED-667 F5** on enclosed inquiry slip



FOR ACCURATE Steam Pressures
MASONEILAN NO. 11 Reducing Valve

Field records prove this the most accurate, dependable steam reducing valve in its class. Responds instantly to slightest pressure variations. Superfinished stainless steel pilot valve, housing, and main valve prevent sticking or corrosion. Unusually easy to service — maintenance consists of *little more than keeping the moving parts clean.* All parts may be removed with valve in the line.

Initial pressures up to 250 lbs. reduced to any desired pressure from 10 to 90 lbs., or 75 to 225 lbs. Sizes ½" to 2" with bronze body. Also available in iron and steel.

Call your local Mason-Neilan Industrial Distributor for fast, dependable service.

MASON-NEILAN REGULATOR CO.
1189 ADAMS STREET, BOSTON 24, MASS., U. S. A.

For more details circle **NED-668 F5** on enclosed inquiry slip

MAGNETIC CONVEYOR
moves ferrous parts up steep slopes

Ability of Space Saver magnetic conveyor to carry ferrous pieces and parts up inclines as steep as 90 degrees makes possible close grouping of machines to save floor space. Conveyor can also be used to remove scrap from receiving pits, automatically stack flat ferrous pieces, feed machines and perform other handling operations. Speeds can be planned so that material transfer between machines may be synchronized for automatic operation. Stationary and portable, standard or custom types are available for new or existing production lines. Made by **Homer Mfg. Co.,** Dept. 124, Lima, O.

For more details circle **NED-669 F5** on enclosed inquiry slip

INDUSTRIAL ENGINE
air-cooled, 30-hp model

Full pressure lubricating system, replaceable copper-lead connecting rod bearing inserts, crankshaft extensions to fit customer requirements and Stellite valves and valve seat inserts are features of the model C2-90 two-cylinder vertical valve-in-head industrial engine. It develops 30 hp at 3000 rpm. Thompson positive valve rotators are available as optional equipment. Engine has a double-row thrust bearing for pump and other applications. Base mounting dimensions, shaft dimensions and mounting bracket dimensions are interchangeable with other major air-cooled engine units. Made by **Avco Mfg. Corp.,** Lycoming Div., 652 Oliver St., Williamsport, Pa.

For more details circle **NED-670 F5** on enclosed inquiry slip

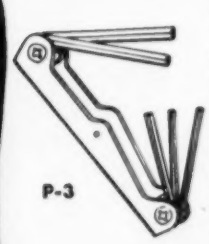
Lifts & Ramps

Globe Hoist Co.—Condensed specifications and descriptions of line of oil-hydraulic and electric materials handling lifts are found in folder "Modern Lifting." Covered are loading, production, bridge, paper roll, industrial truck service and electric powered platform lifts; self-leveling ramps; and ramp eliminators.

For more details circle **NED-671 F5** on enclosed inquiry slip

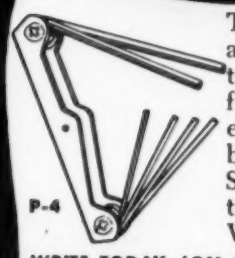
YOU ASKED FOR IT...
Here They Are! THREE NEW LARGER SMITTYS!

3/8" 5/16" 1/4" 7/32" 3/16" 5/32" 1/8" 3/32" 5/64" 1/16" .050"



The famous Smitty Jacknife type sockethead set is now available in 5 different models. Everybody needs a Smitty—the right size wrench is always available — never lost or "borrowed." No scattering, no rummaging thru tool box. Husky handles won't bend or break—gives greater leverage at any angle.

Smitty JACKNIFE DRIVERS
For Sockethead Bolts & Set Screws



The Smitty sets now handle all set screws from the #3 thru 3/4"—and all cap screws from #1 thru 9/16". Included in the new larger combinations is a long blade Smitty which is equivalent to the long arm series Hex Wrenches.

WRITE TODAY (ON COMPANY LETTERHEAD) FOR INDUSTRIAL CATALOG OF UNUSUAL, PRACTICAL HUNTER TOOLS, PLUS SPECIAL QUANTITY QUOTATIONS.

HUNTER TOOLS **HUNTER TOOL COMPANY**
DEPT. 3, 6608 S. GRETNA, WHITTIER, CALIF.

For more details circle **NED-672 F5** on enclosed inquiry slip

You may not be testing pills, but...

. . . just about any other kind of object or material could also be tested in this way using an ordinary arbor press. And this is only one of the countless uses you'll find for the versatile . . .

DILLON
MECHANICAL PRESSURE GAUGE

Flexes millions of cycles without losing resiliency. Sustains 25% accidental overload. Capacity from 0-10 lbs. to 0-10,000 lbs. Accurate to within one division. LOW COST. Dependable.

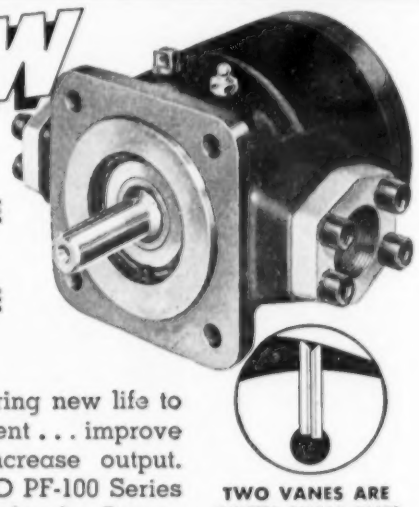
Write Today for Profusely Illustrated Literature

Dillon Pressure Gauge checking hardness of compressed medical tablets.

W. C. DILLON & CO., INC.
14628NE Keswick St., Van Nuys (Suburb of Los Angeles), Calif.

For more details circle **NED-673 F5** on enclosed inquiry slip

NEW
A HIGH PRESSURE PUMP AT A LOW PRESSURE PRICE!



Now you can bring new life to existing equipment . . . improve performance, increase output. The *new* DUDCO PF-100 Series DUAL-VANE Hydraulic Pumps give continuous 2000 psi premium performance . . . they are interchangeable with and *cost less* than older, conventional *low pressure* pumps of equal capacity.

TWO VANES ARE BETTER THAN ONE!

The hydraulically balanced DUAL-VANES in DUDCO Pumps, as contrasted with conventional designs, maintain MULTIPLE AREAS OF CONTACT ON THE CAM RING . . . doubling the number of effective barriers to slippage and power loss. This patented principle is an exclusive DUDCO feature!

Free! Bulletin DP-302A tells what the new PF-100 Series Pumps can do for you . . . how you can modernize equipment and save money. Write Today!

DUDCO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1708 EAST NINE MILE ROAD • HAZEL PARK • MICH.
INTERNATIONAL SALES OFFICE, 90 WEST ST., NEW YORK 6, N. Y.

For more details circle **NED-674 F5** on enclosed inquiry slip

Clarke
cuts floor maintenance costs

Wet scrubbing at low cost with Clarke P-17 Floor Maintainer

Clarke floor machines cut physical effort and costs to a minimum. And — best of all — your floors are *clean, safe* and *bright.* For an unsurpassed cleaning team there's a Clarke floor maintainer and vacuum cleaner sized for your job and budget.

Your copy FREE! Write today for 22-page "Your Floors and How to Care for Them."

Clarke SANDING MACHINE COMPANY
622 East Clay Ave., Muskegon, Mich.

Authorized Sales Representatives and Service Branches in Principal Cities

Distributed in Canada
G. H. Wood & Co., Ltd., P. O. Box 34, Toronto 14, Ont.

For more details circle **NED-675 F5** on enclosed inquiry slip

IMMEDIATE DELIVERY

from the World's Largest Stock CHROMALOX Electric Heaters

Chromalox offers you prompt service from the world's largest factory stock of industrial electric heaters . . . over 15,000 types, sizes and ratings. Local stocks at strategic points throughout the nation.

There is a specific Chromalox Electric Heater to heat liquids, air and gases; for heating platens, dies, molds, moving metal parts . . . anywhere you need fast, clean, economical and easy-to-control heat up to 1100° F.

Let the Chromalox Sales-Engineering staff solve your heating problems . . . electrically.

Write for your copy of Catalog 58
Contains information on complete line of Chromalox Electric Heaters, elements, thermostats, contactors and switches. Gives uses, construction information and prices, plus basic heat calculation data and heat loss charts. For ideas on additional applications of electric heat, request Booklet F1550—"101 Ways to Apply Electric Heat." Write today.

Edwin L. Wiegand Company
A-4447 7509 Thomas Boulevard, Pittsburgh 8, Pennsylvania
See other ad on page 4

For more details circle NED-676 F5 on enclosed inquiry slip

Make permanent repairs in broken cast iron equipment

This cast iron support for an 8-ft. metal shear broke in a freak accident. With NI-ROD "55" welding electrodes it was permanently repaired in just 3½ hours!

Simplify *your* cast iron welding with NI-ROD "55" electrodes. Work on A.C. or D.C. with stable arc, smooth bead contour. *Welds match color of base metal.* You seldom need preheat or postheat.

Most welders choose NI-ROD "55" for welding heavy cast iron sections, alloy cast irons, and cast iron to other metals. They usually choose its companion electrode, NI-ROD, for light sections and for maximum machinability.

See how others simplify cast iron welding. Send for NEW FOLDERS ON NI-ROD AND NI-ROD "55". Circle the number below on reply card.

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street New York 5, N. Y.

INCO **Welding Products**
Electrodes • Wires • Fluxes

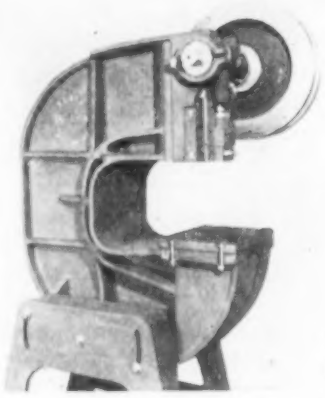
For more details circle NED-677 F5 on enclosed inquiry slip

DIAPHRAGM VALVE controls corrosive liquids and gases

Slurries, fluids, gases and corrosive materials at temperatures to 150° F and pressures to 150 psi can be handled by this rigid Koroseal diaphragm valve. The straightway type valve works like a pinch clamp and is closed by pressing a flexible diaphragm against a raised bottom which is curved to fit the diaphragm. When fully closed the diaphragm is seated under pressure. Absence of pockets, corners, grooves and sharp changes of direction make it self-cleaning. Stem and working parts are sealed off by the diaphragm. Sizes available are ½, ¾, 1, 1¼, 1½ and 2 in. Made by **B. F. Goodrich Co.**, Industrial Products Div., Dept. E, 500 S. Main St., Akron 18, O.

For more details circle NED-679 F5 on enclosed inquiry slip

DEEP-THROAT PRESS for fast precision stamping



This 15-ton, 15-in. deep-throat press which is furnished only as a floor model is designed for fast precision stamping. Press is solid-backed, but has the inclinable feature. It can be furnished with single or double-hand control, or foot control. Press is constructed with solid, one-piece alloy crankshaft, a 2⅜-in. diameter pin and a 20-in. diameter, 200-lb flywheel. Extra-long, V-type ramways guide ram through its travel. Frame is multiple-rib design. Ram hole is 1 9/16 in., accommodating standard die sets, and driving mechanism is self-contained in clutch collar. Press has single-trip control which requires only 1 to 2 lb operating pressure. Made by **Kenco Mfg. Co.**, Dept. NED, 5211 Telegraph Rd., Los Angeles 22, Calif.

For more details circle NED-680 F5 on enclosed inquiry slip

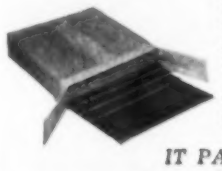
Adjustable Steel Shelving

Frick-Gallagher Mfg. Co.—Klip-Bilt steel shelving which is erected without bolts is subject of 4-page brochure No. 701. Three types of simple clips are used for installation, and assure shelving that is rigid, sagproof and sturdy enough to resist vibration. Several types of high-strength shelf constructions are available to accommodate varying shelf loads from average to extra heavy.

For more details circle NED-681 F5 on enclosed inquiry slip

That's right—installed under machine feet, these ribbed, resilient pads cut costs. First—by absorbing most of the shock and vibration normally transmitted to floor. This in turn reduces building damage and machine maintenance—also muffles annoying noise.

In addition, you save on *installation costs.* No bolting needed—machines stay put on the pads. No waste either—you use only as much as needed for the load by easily cutting pads to size. One economy standard package gives you mountings for 80 tons of machinery—including punch presses.



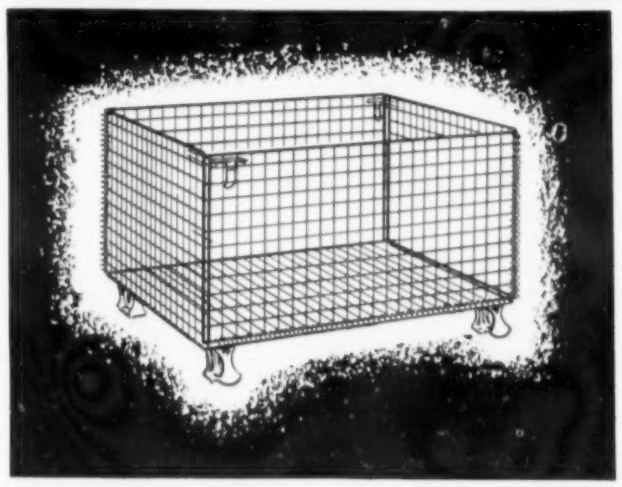
Made of Neoprene, Isomode Pads last for years. Write for Bulletin 415 and prices.

® Trade Mark Reg. U.S. Pat. Off.

IT PAYS TO KEEP A PACKAGE IN STOCK

THE MB MANUFACTURING COMPANY, INC.
1066 State Street, New Haven 11, Conn.

For more details circle NED-682 F5 on enclosed inquiry slip

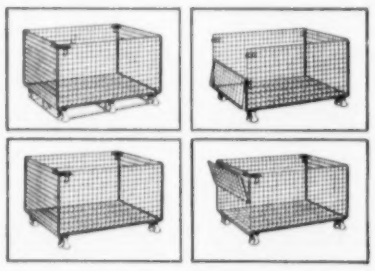


Any Questions . . .

Palletainers are *not* new. For years they have been the *standard* of economy for modern materials handling applications—everywhere! Engineered containers, they are safer, more dependable and their rugged constructional characteristics assure a longer work life. In fact, only Palletainers offer you so many *exclusive* convenience features.

Why not send for your copy of the big illustrated Palletainer Catalog? It's loaded with interesting and unusual applications . . . and dollar-saving suggestions. Then see for yourself how many places Palletainers could save time, money and effort in your plant.

USP Palletainers are available in a broad range of sizes and types to suit your specific needs. Regular models incorporate the famous *exclusive* Palletainer leg, lock, retainer link and flat-fold side features. All models fold down to save 75% of return shipping or storage space.



Gentlemen: Please send me my copy of the big, new illustrated USP Palletainer booklet at once.

Name _____ Title _____
Company _____
City _____ Zone _____ State _____
Address _____
☐ Please have your Palletainer representative contact the above.

PALLETAINERS

Manufactured Only by
UNION STEEL PRODUCTS CO.
ALBION, MICHIGAN

For more details circle NED-683 F5 on enclosed inquiry slip

2 Ladders in 1

aluminum
COMBINATION A and EXTENSION LADDER

NEW To change from an Extension to an A Ladder—pull the bottom fly section from the butt ladder. It locks automatically in place for safe use.

ALCO-LITE

extended lengths — 21' to 29'
weights — 52 lbs. to 67 lbs.

STORES EASILY.
The adjustable, rubber tipped outriggers that stabilize the A Ladder retract into the side rails for easy storage.

WILL NOT CLOSE IN USE.
Automatic locking device prevents A Ladder from closing in use.

This new ALCO-LITE CAE Ladder is extremely versatile. It has TWO distinct uses — as an Extension Ladder and as an A Ladder. It is made of high tensile strength aluminum alloy, which makes it strong, safe and very easy to handle. It can't rust, rot, burn, warp or splinter. Heavy, corrugated 1", tubular aluminum rungs are permanently attached to the side rails with exclusive ALCO-LITE gusset plate and expansion bushing construction. More than meets the rigid code and tests of the ASA and Metal Ladders Association. WRITE TODAY FOR FURTHER DETAILS.

OTHER ALCO-LITE PRODUCTS—
Step Ladders
Folding Ladders
Platform Ladders
Shelf Ladders
Warehouse Ladders
Extension Ladders
Scaffold Ladders
Conveyors
Stages
Combination Ladders
Fire Ladders

ALUMINUM LADDER COMPANY
Dept. A2
Worthington, Pa.
Please send me further information about the CAE and other ALCO-LITE Aluminum Ladders.
NAME _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____

Aluminum Ladder Company
WORTHINGTON PENNSYLVANIA

For more details circle NED-678 F5 on enclosed inquiry slip

select more practical

COOLANT CLEANING

USE **BARNESDRIL** LABORATORY RESEARCH

To help you get production efficiency in the use of coolants, BarnesdriL maintains complete laboratory facilities for testing samples of contaminated coolants and other industrial fluids. From these tests, the characteristics and quantity of contaminants can easily be determined, and studied for recommendation as to the best possible method for efficient removal.

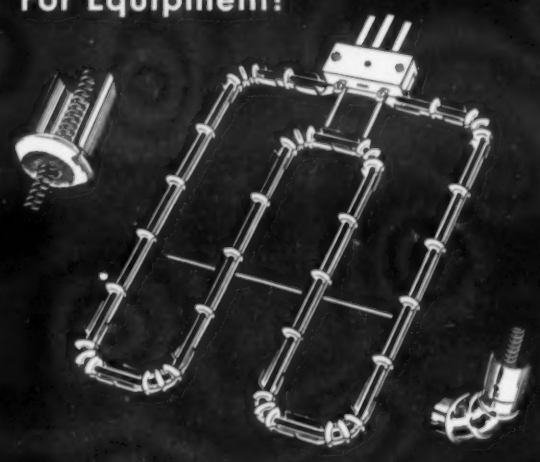
When you have coolant purification problems send them to BarnesdriL Engineers.

COOLANT BARNESDRIL CLEANING

FILTRATION DIVISION
BARNES DRILL CO.
866 CHESTNUT STREET • ROCKFORD, ILLINOIS

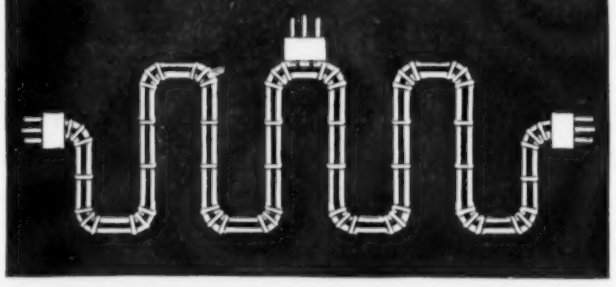
▲ For more details circle **NED-684 F5** on enclosed inquiry slip ▲

For Equipment!



NEW REFLECTUBE®
ELECTRIC HEATING UNITS

For Industrial Heating!



A continuous steel reflector attached to one side of the open-coil element directs the heat where you want it, brings new efficiency to electric heating.

Originally developed for appliances and equipment, REFLECTUBE Heaters are also available to order, in flexible "add-a-section" units for industrial purposes. Each unit comes completely wired and with terminal. And two units can be joined in less than a minute.

Write for prices, giving us complete information on your requirements!

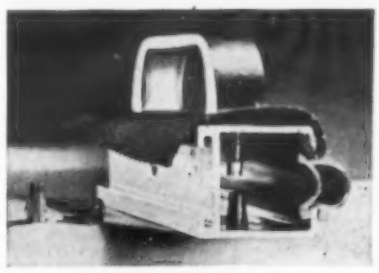
FERRO

FERRO
ELECTRIC PRODUCTS, INC.
KIRKLAND, ILLINOIS

A Subsidiary of FERRO Corporation

▲ For more details circle **NED-685 F5** on enclosed inquiry slip ▲

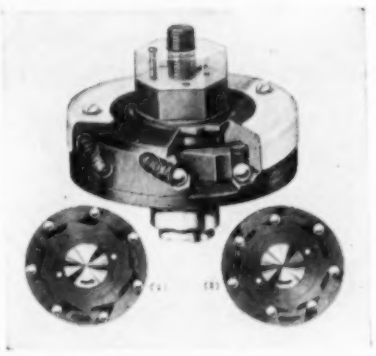
TUBULAR FASTENERS for extruded and die cast parts



Extruded and die cast aluminum parts can be fastened in place with tubular type Speed Clips, turned - in ends of which bite into the studs to lock them in permanent position. Illustration shows application in assembly of a die cast aluminum handle to a folding door. Speed Clip is hand-snapped into mounting hole in the door and held in place by cam-like prongs. After door covering is positioned, studs in handle are easily pressed into the clips. This type of front mounting facilitates installation in blind, hard-to-reach locations. Made by **Tinnerman Products, Inc.,** Dept. 14, P. O. Box 6688, Cleveland 1, O.

▲ For more details circle **NED-686 F5** on enclosed inquiry slip ▲

ELECTRIC PUMP MOTORS now feature nonreverse ratchet



Backspin in vertical hollow-shaft electric pump motors is prevented by Bal-lok nonreverse ratchet which locks within 1/72 of a revolution. Ball - type ratchet is being offered on all pump motors up to 200 hp. When motor rotates in proper direction (1), centrifugal force keeps balls clear of ratchet so that they do not interfere with rotation. Once motor stops (2), balls drop back into ratchet recesses. Should motor begin to turn in reverse, one or more balls will lock in the ratchet, preventing the backspin. Motors also feature canopy-type protective hood; single-row ball thrust bearings; LubriPurge grease lubrication for units with up to frame size 365, closed oil system for motors of frame 404 and larger; centrifugal fan cooling and balanced rotors. Made by **ACEC Electric Corp.,** Dept. PPS, 40 E. 49th St., New York 17, N. Y.

▲ For more details circle **NED-687 F5** on enclosed inquiry slip ▲

Load-Handling Roller Skids

Stokvis Edera & Co.—Multiton roller skids are described as self-laying track dollies for the movement of heavy machinery and other loads in 12-page illustrated booklet "Instructions for the Best Use of Multiton Roller Skids." Both roller and swivel types are available.

▲ For more details circle **NED-688 F5** on enclosed inquiry slip ▲

New Sturdy Folding Work Tables

IN ALL SIZES

SETS UP IN SECONDS!
STORES IN SECONDS!
Gives Work Space Where You Need It When You Need It

Have complete freedom of work area arrangement to adjust to constantly changing needs.

Whatever the production schedule calls for, wherever the job can best be done, set up an efficient work table arrangement in seconds.

UNLIMITED USES

Midwest's versatile Industrial Tables are ideal as work benches for light tools or machines. Unexcelled for assembly, inspection, packing and shipping.

Tops of thick plywood, tempered masonite, plastic or linoleum; steel channel reinforced. Legs of welded carbon steel tubing, guaranteed 5 years.

Write for complete specifications!

ADJUSTABLE LEG LENGTHS

PROVEN DURABILITY

Midwest Industrial Folding Tables are built to withstand the heaviest use. In tests conducted by the Pittsburgh Testing Laboratory, a five foot table was undamaged by a weight load in excess of 600 lbs. per square foot at midspan between the legs.

Midwest

Folding Products
Dept. 2056 Roselle, Illinois

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Model 41 Unconditionally Guaranteed

eliminate switch failures with THE SWITCH THAT'S always READY

Pampered in production to withstand abuse in use, the Levolier* #41 switch retains its positive action even after hundreds of thousands of pulls. It is unconditionally guaranteed against failure in lighting circuits. Its one-piece molded phenolic case insures better insulation, makes wiring easier. Removal of the mounting nuts lets the mechanism slip out, exposing terminals. A 6 amp "T" 125 volt switch, it is only 5/8" x 1 3/8" x 1 3/8". Ideal for individual control of lighting fixtures.

Send for McGILL Catalog No. 49-A

50th McGILL Anniversary

YOU CAN DEPEND ON McGILL QUALITY

McGILL MANUFACTURING CO., INC. 151 N. Campbell St. Valparaiso, Indiana

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DeLuxe **CUTS INSTALLATION EXPENSE 50% OVER ORDINARY SHELVING**

TIME CONSUMING INSTALLATION DETAILS ELIMINATED...

HERE ARE GOOD REASONS WHY DELUXE BUILT-IN FEATURES MEAN LOWER SHELVING COSTS TO YOU:

SPEEDS ASSEMBLY — One piece bin type upright — offers I beam strength. Speeds assembly.

• Shelves have reinforcing bar imbedded into front and rear flanges and returned into the end flanges where they engage the uprights.

FREE CATALOG

. . . Write for complete 48 page fully-illustrated catalog of DeLuxe Steel Shelving.

DELUXE METAL FURNITURE CO.
353 STRUTHERS ST., WARREN, PA.

DIVISION OF ROYAL METAL MANUFACTURING COMPANY

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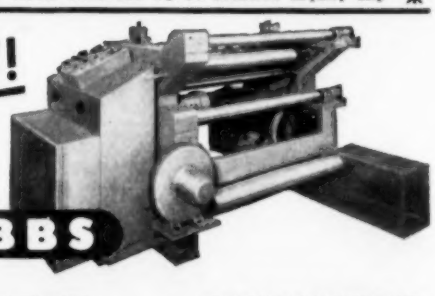
It's NEW!



HOBBS

40" SLITTER and REWINDER

For Converting Sensitized Film, Polyethylene, Acetate, Cellophane and Other Plastics

DESIGNED FOR MATERIALS NEEDING CONTROLLED TENSION IN HANDLING

This brand new machine was designed for modern production. It has rewind tension control, variable speed and acceleration controls, automatic web guiding, smooth acting, self-adjusting electric clutch drive. Gives accurate clean slit edges with fast, positive, adjustable shear type cutters. Automatic vacuum system instantly removes trim.

Bring your slitting operations up-to-date and the cost down. Write TODAY for full information about the new HOBBS 40" Slitter and Rewinder.

HOBBS **MANUFACTURING CO.**
41 Salisbury St., Worcester 5, Mass.

EST. 1888

New York Office at 132 Nassau St.
Chicago Office at 549 W. Washington Blvd.

Winders • Hand & Power Shears • Die Presses • Slitters • Corner Cutters

▲ For more details circle **NED-692 F5** on enclosed inquiry slip ▲

REVERSING RAM MAKES DIE CHANGES EASY

This ruggedly built press is an operator's delight. It is provided with a reversing ram drive which permits backing the ram or upper die away from the work at any point in the stroke.

The reversing ram speeds positioning dies when starting a new job. It is a great help in adjusting the ram to obtain a specified bend or shape. Rating of above press is ½" x 14'-0" steel, but it will bend plate to 18'-6".

STEELWELD BENDING PRESSES CATALOG No. 2010

Send for free copy of catalog No. 2010.

THE CLEVELAND CRANE & ENGINEERING CO.
6664 E. 281st St., Wickliffe, O.

STEELWELD PRESSES

▲ For more details circle NED-693 F5 on enclosed inquiry slip ▲

there's a **THIEF** in your plant!

Like an invisible hand in your safe, **SCRAP** represents the greatest material and man-hour thief of profits in plants big and small in the metal machining industry.

This $5,000 worth of parts was salvaged at 12% of the original cost of parts.

Working with plants throughout the country Elox found these interesting facts...

1. Some employees hide scrap
2. Some employees are afraid to report scrap
3. Some department heads won't admit the amount of scrap they actually have
4. Management didn't know how to solve the salvage problem

Today Elox equipped plants salvage 100% of scrap due to broken taps, drills, reamers, etc., profitably. Even on parts costing as little as 25c.

we can show YOU how!

elox corporation, of michigan

738 N. Rochester Rd. • Clawson, Michigan

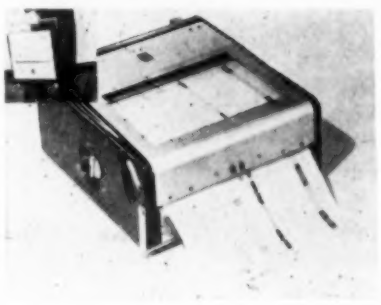
▲ For more details circle NED-694 F5 on enclosed inquiry slip ▲

WATER REPELLENT SHOES made from silicone treated leather

Unusual water repellency as well as resistance to absorption of chemicals is feature of line of Sylflex tanned work shoes and boots. Sylflex is a Dow Corning silicone treatment which is applied to leather during its tanning. Leather is made highly water resistant without sealing of its pores. Thus, "breathing" of shoes is unimpaired. Work shoes are made of high grade glove leather in 6-in. shoe styles as well as 8-in. boots. Seamless one-piece back gives comfortable fit around ankles. Neoprene soles and heels add to long wearing, water-resistant qualities. When shoes do get wet, they can be placed near heat for quick dry-out. Leather remains soft and pliable. Made by **Red Wing Shoe Co.**, Dept. A, Red Wing, Minn.

▲ For more details circle NED-695 F5 on enclosed inquiry slip ▲

PORTABLE OSCILLOGRAPHS are four and six-channel recorders



Range of 16 chart speeds with travel variation of from 10 in. per day to 10 in. per second are features of four and six-channel portable oscillographs. Used for recording electrical variables, vibration, torque, stress, strain and other measurements, the four-channel unit weighs 36 lb and the six-channel recorder weighs 48 lb. Both models, equipped for either ink or electric writing, can record a great range of signals with optimum resolution. A control selector permits either local or remote control setup. Easy access to writing table is provided and event markers are available to provide markings for any time and event correlation. Charts themselves can be filed. Made by **Brush Electronics Co.**, Equipment Dept. RT-2, 3405 Perkins Ave., Cleveland 14, O.

▲ For more details circle NED-696 F5 on enclosed inquiry slip ▲

Fiber Tote Boxes, Trucks, Baskets & Cans

Federal Fibre Corp.—1955 catalog of materials handling equipment entitled "Tough Babies" is descriptive of Fedco fiber box trucks, tote boxes, mill boxes, utility cans and waste receptacles. Full details are given on these lightweight, durable materials handling items.

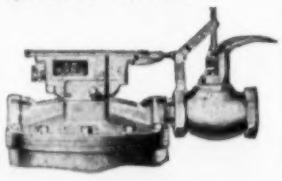
▲ For more details circle NED-697 F5 on enclosed inquiry slip ▲

Automated liquid handling depends on meters...

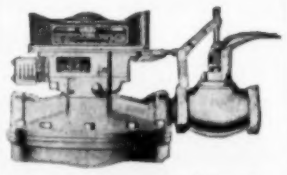
SPECIFY THE INDUSTRY-PROVED

BOWSER XACTO

Recording printer mounts on meter. Prints quantity dispensed or received.



Delivers predetermined quantities up to 10,000 gallons, then shuts off.

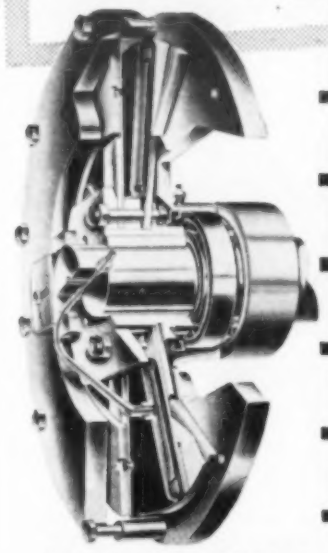


A repeating control for delivery of predetermined quantities. Automatic. With or less recording printer.

BOWSER, INC., FORT WAYNE, IND.
1381 E. CREIGHTON AVE.

▲ For more details circle NED-698 F5 on enclosed inquiry slip ▲

FRICTION AIR CLUTCHES TO YOUR SPECIFICATIONS



- No adjustment
- No moving parts to wear out
- No slip when fully engaged
- Compact design... Less shaft space
- No drag when disengaged

Sizes from 12" to 33¾" in diameter, single, double or triple plate with capacities ranging from 9,000 to 1,080,000 inch pounds torque. Automatic or manual engagement. Supplied in any quantity to manufacturers only.

Patented and Manufactured by
BOX 2001 DEPT. 1 **CARDWELL MFG. CO. INC.** WICHITA KANSAS

▲ For more details circle NED-699 F5 on enclosed inquiry slip ▲

New ZINCOATER HOLDS PAINT BETTER ON GALVANIZING

Because zinc sticks to zinc, Tropical Zincoater (made with zinc dust) on galvanized iron provides a better, moisture-resistant base for finish paint. Paint jobs hold better, last longer, regardless of weather when Zincoater is applied on galvanized buildings, signs, truck bodies, water tanks, ducts, dams.

FREE! **Literature sent on your business letterhead request.** ***Write today!***

Heavy-duty Paints since 1883

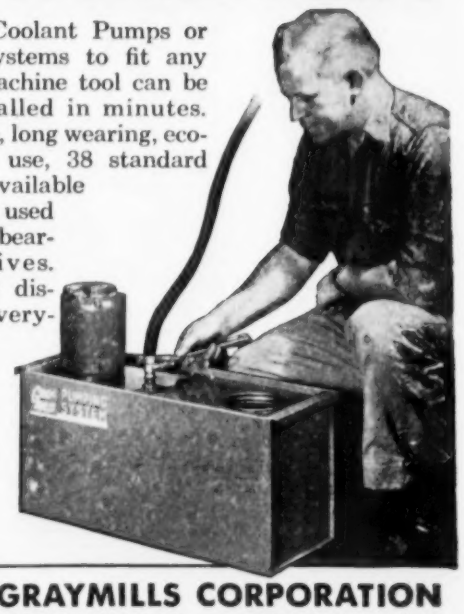
TROPICAL PAINT COMPANY
1124-1232 West 70th St., Cleveland 2, Ohio
Subsidiary Parker Rust Proof Co.

▲ For more details circle NED-700 F5 on enclosed inquiry slip ▲

Specify Low Cost—Long Life

DEPENDABLE GRAYMILLS COOLANT PUMPS

Graymills Coolant Pumps or complete systems to fit any standard machine tool can be easily installed in minutes. Dependable, long wearing, economical to use, 38 standard models are available and can be used with liquids bearing abrasives. Stocked by distributors everywhere.



Write for catalog

GRAY-MILLS

GRAYMILLS CORPORATION
3717 N. LINCOLN AVE. CHICAGO 13, ILLINOIS

▲ For more details circle NED-701 F5 on enclosed inquiry slip ▲

New Efficiency

The sensational new FLEX-A-PRENE Paint Mask keeps out paint pigments and solvents with amazing efficiency, yet it's light (just 1 ounce), comfortable and so easy to talk and breathe through you hardly know you're wearing it.

New Economy

FLEX-A-PRENE's low first cost is only part of the story. Most important savings come from its endurance in service and time saved through less frequent filter replacements. You can expect at least 100 hours of exposure before replacement is necessary.

Sample: $1.50 postpaid
(INDUSTRIAL PRICE ONLY)

FLEXO PRODUCTS, INC. Cleveland 13, Ohio

▲ For more details circle NED-702 F5 on enclosed inquiry slip ▲

The coolant stinks, eh?

Well, don't dump it!

We'll kill that odor with the new powder-additive: Rance-RID

IT'S A SERIOUS COST-PROBLEM:

Metalworking plants are pouring coolant and labor dollars down the drain. The reason: coolant turns rancid.

RANCE-RID SOLVES THE PROBLEM:

It restores *the original condition* of the oil emulsion. It smells, looks, and *is* like new. No masking odors are used . . . Use it in central-type coolant systems, or in individual machines. Treat the same coolant over and over again!

TRY RANCE-RID—AT OUR EXPENSE:

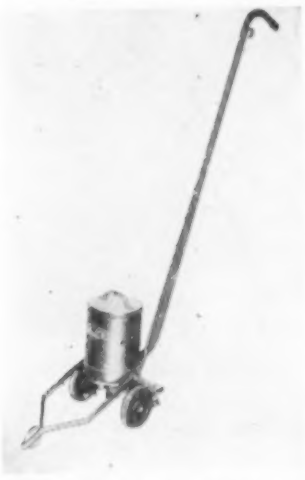
That sounds generous. Actually, it isn't. Rance-Rid sales have been built on *one-ounce samples. Just one ounce treats 20 gallons* of soluble oil emulsion . . . Try it—at no cost. Your inquiry brings the sample.

HERSEN CHEMICAL CO.
824-F FISHER BLDG., DETROIT 2, MICH.

▲ For more details circle NED-703 F5 on enclosed inquiry slip ▲

▲ For more details circle NED-704 F5 on enclosed inquiry slip ▲

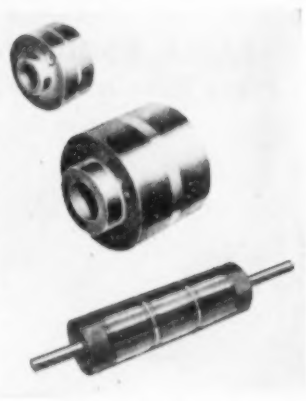
LINE MARKER
paints 2, 3 or 4-in. lines



Brush sizes for painting 2, 3 or 4-in. lines on any hard surface can be used interchangeably on model 250 line marker. Unit is offered in 2 and 4-qt capacity models. Desired pressure on brush is maintained by varying position of liner handle. Raising handle toward vertical position lifts brush completely off painted surface. Valve lever on handle is employed to control paint flow. Made by **Jawco Products Corp.**, P. O. Box 1224, York 1, Pa.

▲ For more details circle NED-705 F5 on enclosed inquiry slip ▲

PERMANENT MAGNET ROLLS
two types in four diameters



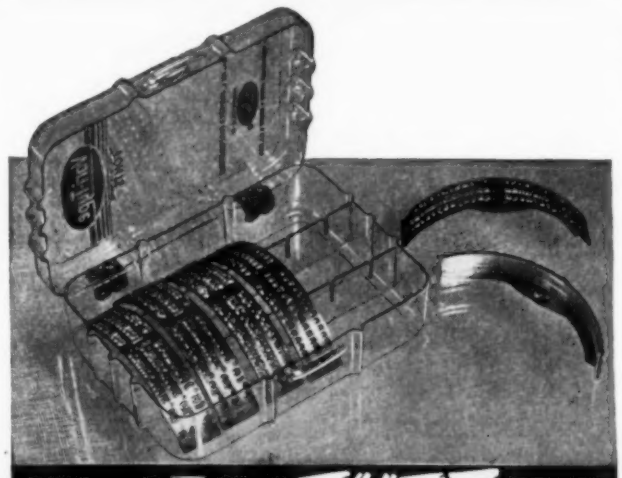
Applications for group of small diameter permanent magnet rolls, offered in two basic types in four different diameters, include automatic handling and conveying of sheet during baking, painting, annealing, stamping and trimming operations and pickup of sheets, tubes and pipes on conveyor lines. Type for sheet feeding and conveying is built with 4 and 5-in. roll diameters in widths from 4 to 24 and 4 to 72 in., respectively. Second type is designed to afford spot control in particular conveying problems. They are made in two sizes: 2½ in. diameter by 1 3/16 in. wide and 4⅜ in. diameter by 1 3/16 in. wide. All four models are mounted on a nonmagnetic stainless steel shaft. They have a smooth machined steel shell with hard chrome surface. Made by **Eriez Mfg. Co.**, 1325 E. Twelfth St., Erie, Pa.

▲ For more details circle NED-706 F5 on enclosed inquiry slip ▲

Rod & Sheet Packings

Allpax Co.—Description of construction, applications and forms available are included for entire line of rod and sheet packings in 48-page illustrated catalog "The Packing that Packs All." Also covered are gasket cutters and accessory items. Packings include high pressure, metallic, flax and jute, and sheet types in loose, coil, spool, ring, set and spiral forms.

▲ For more details circle NED-707 F5 on enclosed inquiry slip ▲



Lite-TUFF

PLASTIC BOXES THAT CAN TAKE ABUSE . . . made of Non-Flam* light weight plastic. Standard boxes available in a wide variety of compartment arrangements. Very tough will not crack or shatter in normal use. Resistant to most chemicals—samples supplied for tests.

Full information and PLOT PLAN SHEETS sent upon request . . . Dept. B-9

* Reg. U. S. Pat. Off.

SHOE FORM CO. INC. AUBURN, NEW YORK

▲ For more details circle NED-708 F5 on enclosed inquiry slip ▲

Automatic Feed Precision Belt Grinder

Output up to 14,000 Pieces per Hour!

Engelberg / Porter-Cable BG8 AUTOMAT

Precision grinds small parts faster than any comparable machine.

High production is achieved through the use of an 8" wet-dry belt and a continuous Automatic Work Feed and Ejector. Feed cycles range from 1090 to 1750 per hour. Straight-line finish assured with tolerances of ± .001" to ± .0005". Proved over years of use in hundreds of plants.

Send us sample pieces for grinding and polishing recommendations. Or ask to have one of our production engineers call and discuss your problems in your plant. No charge. No obligation.

Free Production Case History book on request. The Engelberg Huller Co., Inc., 166 Seneca Street, Syracuse, New York.

ENGELBERG Manufacturers of Porter-Cable Abrasive Belt Machines

▲ For more details circle NED-709 F5 on enclosed inquiry slip ▲

NEW, IMPROVED TYPE screw anchor expanders

quickly set anchors in masonry of any thickness, holes of varying depth

Now, with the new GREENLEE Screw Anchor Expander you can rapidly and *securely* set lead screw anchors *flush* with the surface of masonry . . . *regardless of its thickness . . . regardless of hole depth.* Eliminates all guesswork . . . the expander tool positions the anchor *positively* every time. Fast, easy operation. Simply drill hole, screw the anchor onto expander, insert in hole, then strike expander with hammer. Three sizes for most widely used sizes of anchors. Write for descriptive literature. Greenlee Tool Co., 1946 Herbert Ave., Rockford, Illinois.

GREENLEE

▲ For more details circle NED-710 F5 on enclosed inquiry slip ▲

TUBE

FLARING MACHINES
BEADING MACHINES
DEBURRING MACHINES
BENDING MACHINES

LEONARD Precision Products Co.

9200 Bolsa Avenue, Santa Ana, California

▲ For more details circle NED-711 F5 on enclosed inquiry slip ▲

NEW GAST Model 0211 AIR PUMP weighs ⅓ less — is a truly

COMPACT COMPONENT

This *new* Gast rotary-vane Air Pump offers many advantages, including: ⅓ less weight — (now 22 lbs.) — with more compact, streamlined design. Rotor mounted on new G. E. Form "G" motor shaft. Vanes give positive, pulseless air delivery. Rubber-cradled mounting dampens vibration, increases quiet.

Model 0211 produces up to 25 p.s.i. or 27" vac., or 1.3 c.f.m. running open. ⅙ h.p. motor uses only 3.8 amps. Ideal for automatic machines, industrial instruments and controls. Present uses: paper feeding in packaging, printing frames, or as portable laboratory air source.

Let *your* product benefit from this compact component — *write for Bulletin 1254 and "Application Ideas" Booklet!* **Gast Manufacturing Corp.,** P.O. Box 117-R, Benton Harbor, Michigan.

Original Equipment Manufacturers for Over 25 Years

GAST ROTARY
• AIR MOTORS TO 4 H.P.
• COMPRESSORS TO 30 P.S.I.
• VACUUM PUMPS TO 28 IN.
See Our Catalog in Sweet's Product Design File

▲ For more details circle **NED-712 F5** on enclosed inquiry slip ▲

At Last...A Low Cost, Packaged Conveyor!

R-W "460" Continuous Power Chain Conveyor

"460" chain-of-wheels principle gives smooth, friction-free movement through track.

- FLEXIBLE
- VERSATILE
- SAFE
- LOW COST
- NO ENGINEERING NEEDED
- INSTALL IT YOURSELF

Now you, too, can have all the advantages of an overhead conveyor in your plant. Richards-Wilcox' new "460" is the *practical, low-cost* conveyor for smaller plants and for supplemental use in large factories. It combines unusual flexibility, versatility and safety with special economies due to lower load limits. *And installation requires no special engineering or cumbersome superstructure . . . entire layout can be installed by your own personnel!*

R-W "460" is available *completely packaged* from stock throughout the U. S. in lengths up to 200 feet, with capacities of 8½ lbs. on 6-inch centers or 17 lbs. per lineal foot and 200 lb. drawbar pull. It's the ideal conveyor for supplemental use in assembly and production lines, and solves countless handling and movement problems where washers, degreasers, paint sprayers and similar operations are involved.

75 YEARS of QUALITY and SERVICE by RICHARDS-WILCOX AURORA, ILLINOIS

Write today for Catalog A-96

Richards-Wilcox Mfg. Co.
MATERIALS HANDLING DIVISION
Branches in Principal Cities
435 W. THIRD STREET, AURORA, ILLINOIS
SLIDING DOOR HANGERS & TRACK • FIRE DOORS & FIXTURES • GARAGE DOORS & EQUIPMENT • INDUSTRIAL CONVEYORS & CRANES • SCHOOL WARDROBES & PARTITIONS

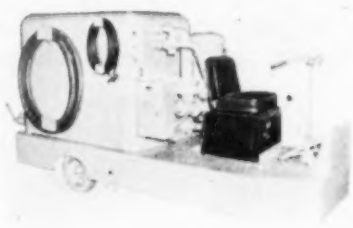
▲ For more details circle **NED-713 F5** on enclosed inquiry slip ▲

MACHINE CONTROL PANELS for traverse, feed and return

Control panels designed to provide rapid traverse forward, either one or two adjustable forward feed rates depending upon model and rapid return, have operating pressures up to 1000 psi. Model LA, LB and LD series units have ½ and ¾-in. IPS fittings and volumes up to 20 gpm. They are available either electrically operated or with electrically operated reversing control and cam operated feed selector. Electrical portion of panels is solenoid control pilot. Design prevents rapid traverse forward or rapid return out of cycle if a solenoid should burn out. Feed rates are adjustable from 10 cu in. per minute to 4.2 gpm. Made by **Double A Products Co.,** Dept. L-175, Manchester, Mich.

▲ For more details circle **NED-714 F5** on enclosed inquiry slip ▲

SUMP CLEANER hauls, discharges 200-gal loads



Waste oil, water or sludge containing metal chips, grindings, abrasives, metal objects, string and wire and of any viscosity, is collected, hauled and discharged by the Sludge-King mobile scavenging unit. Intended for cleaning machine sumps and drainage pits, the 200-gal capacity unit is also being used for processing and reclaiming chemicals, foods and pharmaceuticals and pulling carbon and other foreign matter from diesel engines. It develops a vacuum of 28 in. of mercury and forces out contents of its collection chamber at heights above 30 ft with 20 psi pressure. Truck-mounted unit is clogproof and is only 99 in. long. The vacuum generator is powered by gasoline engine or electric motor and the truck is powered by a 13-hp, two-cycle air-cooled engine. Made by **Laidlaw Co.,** Engineered Equipment Dept., 1606 N. Illinois St., Indianapolis 2, Ind.

▲ For more details circle **NED-715 F5** on enclosed inquiry slip ▲

Color-Coded Compression Ferrules

Burndy Engineering Co.—Line of Hyring color-coded compression ferrules for grounding shielded wire and coaxial cable, terminating rod type heating element studs and splicing solid and stranded wire is subject of descriptive illustrated bulletin 55Y1. Dimensional chart that illustrates Hyrings in seven colors is included.

▲ For more details circle **NED-716 F5** on enclosed inquiry slip ▲

NEW ELECTRIC VIBRATOR

Quiet!

A compact, powerful unit designed to speed the flow of stubborn materials through all types of bins, hoppers and chutes.

Obtainable in all voltage, phase and cycle requirements.

Write today for complete literature.

Bin Stuck Lately?

THE CLEVELAND VIBRATOR CO.
2744 Clinton Avenue • Cleveland 13, Ohio

▲ For more details circle **NED-717 F5** on enclosed inquiry slip ▲

SURETY SURESEAL INDUSTRIAL GLOVES

"The gloves withstood the mixed acid test for the three-minute minimum . . . went on for hours with no apparent effect," reports one Sureseal user.

The same extra-high resistance to practically all industrial chemicals plus Sureseal's 4 times greater snag resistance and 10 times greater abrasion resistance mean multiplied service life . . . big cost savings on most jobs.

For all the facts, write for new Sureseal bulletin.

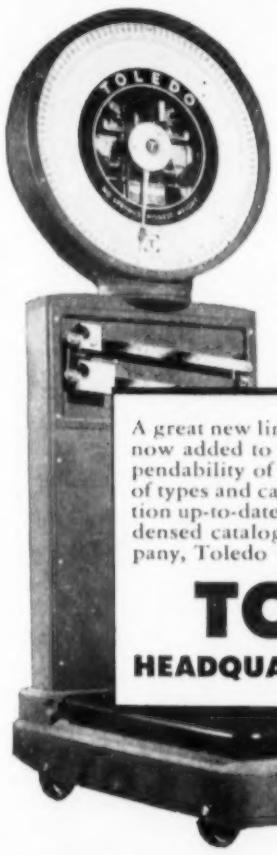
THE SURETY RUBBER CO. Carrollton, Ohio

TURN-CUFFS GIVE 2 WAY PROTECTION

Cuffs up . . . liquids can't run down arms or inside gloves. Cuffs down . . . they provide an extra-long protective gauntlet.

In Canada: Safety Supply Co., Toronto

▲ For more details circle **NED-718 F5** on enclosed inquiry slip ▲



44 WAYS BETTER

A great new line of Toledos! *44 new features* are now added to the traditional accuracy and dependability of Toledo Scales. Complete range of types and capacities. Get your scale information up-to-date . . . write today for the new condensed catalog No. 2001. Toledo Scale Company, Toledo 1, Ohio.

TOLEDO®
HEADQUARTERS FOR SCALES

Model 2181 —New version of the world's most widely used portable dial scale.

▲ For more details circle **NED-719 F5** on enclosed inquiry slip ▲

"Kodak Photorecording Papers and Films . . . how to pick the one you need"

That's the title of a folder we recently published.

It gives you the details about the broad range of photographic films and papers we produce for photorecording purposes, tells you which to use for the application you have in mind, lists the various spoolings and lengths available. If you use photorecording now, or plan to use it in the future, you should have a copy. Just write to:

Industrial Photographic Division
EASTMAN KODAK COMPANY
Rochester 4, N. Y.

▲ For more details circle **NED-720 F5** on enclosed inquiry slip ▲

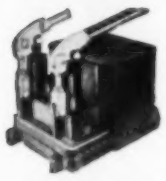
3 NEW HYDRAULIC PUMPS FOR INDUSTRY

OTC

Compact, self-contained pumps for quick delivery of hydraulic power for production or maintenance. Precision engineered and built by OTC for use with their well known Hydraulic Tools. Readily adaptable to countless other applications.

SINGLE SPEED HAND-OPERATED
Remote control operates vertically or horizontally. Develops 10,000 P.S.I. Finger tip control valve. Weight: 15 pounds only.

ELECTRICALLY DRIVEN
For production and maintenance—assures continuous power flow with overload valve. Develops 11,000 P.S.I. Single piston, "V" belt drive, reciprocating type. ½ HP. 60 cycle, 1725 RPM. Other motors optional.

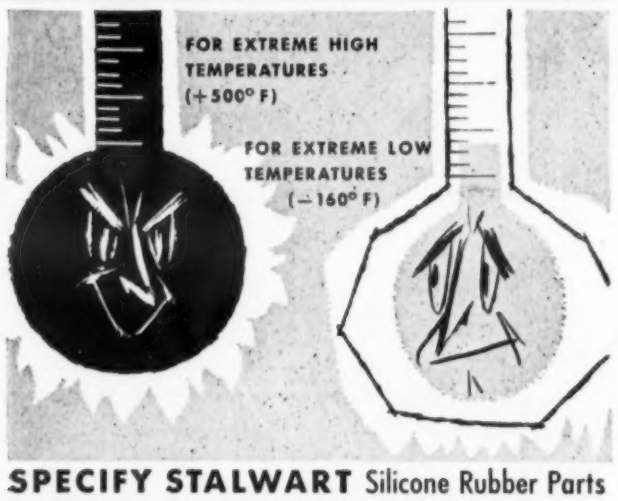


TWO SPEED HAND-OPERATED
Low or high pressure by changing handles. Two pistons ¾" and ½" develop 3,000 or 10,000 P.S.I. Pump units without reservoir for pressures up to 20,000 P.S.I. also available.

See your jobber or write for complete data.

OWATONNA TOOL COMPANY
436 CEDAR ST. • OWATONNA, MINNESOTA

For more details circle NED-721 F5 on enclosed inquiry slip



SPECIFY STALWART Silicone Rubber Parts

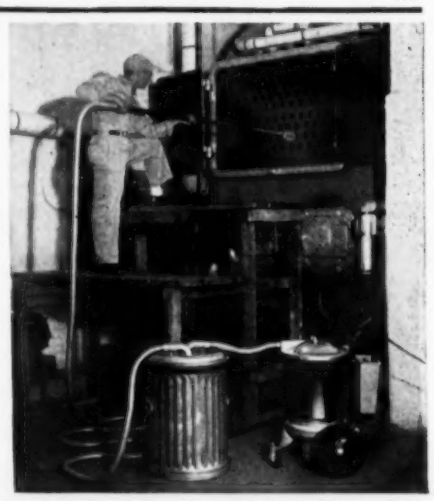
For Silicone rubber parts that give maximum performance at searing temperatures up to +500° F...retain their elasticity down to −160° F ...or have the physical, chemical and dielectric properties to resist chemicals...it will pay you to see STALWART first! From stocks compounded for specific job requirements, STALWART will mold, extrude, die-cut, lathe-cut, or mandrel-build parts to meet individual, S.A.E. or A.S.T.M. specifications. Bring your rubber problems to STALWART... specialists in the custom-fabrication of precision Silicone parts.

For detailed information write for Catalog 515R-1

STALWART RUBBER CO. 6306-SR
MANUFACTURING PLANTS IN BEDFORD, OHIO AND JASPER, GEORGIA
MAIN OFFICES 151 NORTHFIELD ROAD, BEDFORD, OHIO

For more details circle NED-722 F5 on enclosed inquiry slip

Double power cuts costs, clean-up time



KENT

Shown here is a Kent Suction Deluxe Vacuum Cleaner in use at the Parkside Apartments, Bethesda, Maryland. Kent ends messy clean-up time, removes soot and increases boiler efficiency.

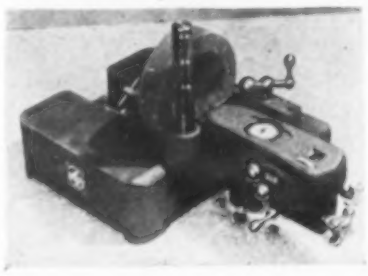
Double fans, double dust-bags, extra 27-gallon dirt tank...all increase boiler cleaning efficiency—cut down heat losses due to accumulated soot in boiler tubes. Modern building management *demands* Kent service for boiler cleaning at frequent intervals.

MAIL TODAY

The Kent Company, Inc., 449 Canal St., Rome, N.Y.
I want to eliminate costly soot in my boilers. Send complete details on Kent equipment.
Name .....
Firm Name .....
Address .....
City ..... State .....

For more details circle NED-723 F5 on enclosed inquiry slip

HARDNESS-LUBRICITY TESTER
usable on wide variety of materials



Natural hardness and lubricity of such materials as metals, glazed tile, glass, carbon, graphite, precast cement shapes, abrasive wheels and hones can be measured by the Dyhedron tester. A dynamic hardness tester, it utilizes a octahedral diamond which is shaped to work itself into the test material with a rotary oscillating motion. Depth of penetration is read from a precision dial indicator, and the 360-degree oscillations of the diamond are read from the rotary counter. Readings obtained relate the ability of the material to resist being marked, gouged or scored through abuse. Models are available for testing metals and ceramics. Made by **Taber Instrument Corp.**, Section 16, 111 Goundry St., North Tonawanda, N. Y.

For more details circle NED-724 F5 on enclosed inquiry slip

CONVEYOR ROLLERS
smooth and finned types of neoprene

Cushioned dent- and scratch-free conveyor rides for finished stampings, panels, glass, plastics and other materials are possible with all-neoprene rollers. Rollers are made in solid self-cleaning finned types for gravity and belt conveyor use and for use as die lifters; solid smooth top type in two degrees of hardness and in a neoprene-sponge type where extreme softness is necessary. All are equipped with two 1¼-in. diameter ball bearings, are 2-in. wide and have 4-in. diameter, except solid finned type for use as die lifters, which is 2½ in. diameter. Parts and mountings are interchangeable. Made by **Stilson Tool, Inc.**, Dept. N, 30233 Groesbeck Highway, Roseville, Mich.

For more details circle NED-725 F5 on enclosed inquiry slip

Small Mobile Cranes

Uhrden, Inc.—Details of the Tubarcrane line which includes ½, 1, 2 and 3-ton capacities are presented in 4-page illustrated bulletin. Lifting power is provided by variable stroke, double-acting, hydraulic hand pump. Control valve permits lowering loads at any desired safe speed. Heavy duty wheels permit rolling this straddle type, adjustable boom crane anywhere it is needed.

For more details circle NED-726 F5 on enclosed inquiry slip

IT ONLY TAKES 2 . . .

RULE 41 AMENDED TO ALLOW 2-STRIP CENTER-SEAM SEALING!

CUT COSTS UP TO 2/3 WITH

Filament Reinforced Sealing Tapes And The FAMOUS DERBY 32-T

The first important closure method change in 40 years! . . . now use 2 strips of tape for all shipments! The Derby 32-T especially designed to dispense all brands of tough filament reinforced tapes quickly, easily, accurately!

Cut Your Shipping Room Costs! Write now, Dept. NED for free booklet about 2 strips and the Derby 32-T

DERBY SEALERS, INC.
DERBY, CONNECTICUT

For more details circle NED-727 F5 on enclosed inquiry slip

THE NEW **HANSEN** SERIES 3-RL
QUICK-CONNECTIVE
RING-LOCK COUPLING

Effectively handles far more volume than any coupling of equal dimensions

● Handles any job in your shop using ¾" to ⅛" connections—from the air line to the air tool. No longer essential to have various size couplings in your hook-up. The Hansen Series 3-RL, with completely interchangeable Sockets and Plugs does it all—simplifies keeping stock of parts in balance—holds inventories to a minimum. Quickly and positively connected merely by pushing Plug into Socket. To disconnect, just turn the sleeve. Locking ring in Socket enters groove in Plug, provides practically 360° metal to metal contact, reduces wear, and insures tight fit. Equipped with automatic sleeve lock.

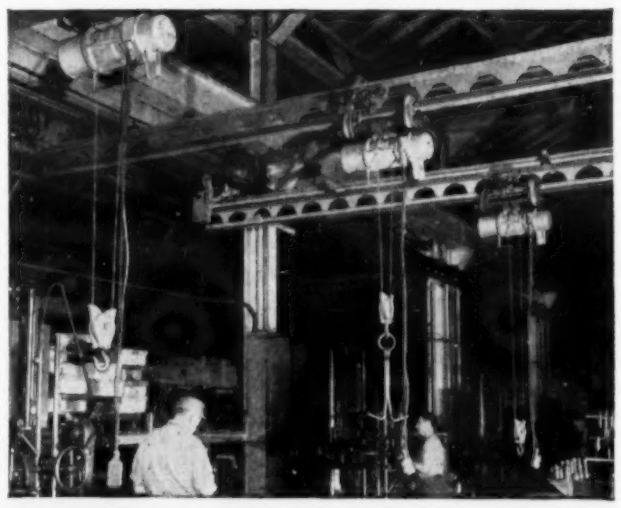
Write for Descriptive Literature

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 11, OHIO

For more details circle NED-728 F5 on enclosed inquiry slip

SHEPARD NILES
LIFTABOUT-JR.

PACE SETTER
on your production line

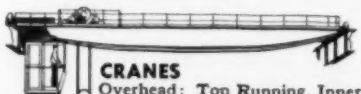


MEN AND MACHINES BOTH PRODUCE FASTER . . .
. . . when a Liftabout-Jr. carries the load! Manual lifting and lugging are banished . . . the worker puts the load right where it's wanted with ease. Ideal for "spot" handling or for speeding raw materials and products along your production line.

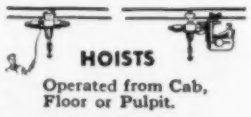
Shepard Niles Liftabout-Jr. is built to withstand years of use and abuse . . . it's the toughest medium-service hoist money can buy. Available with either rope or push button operation . . . parallel or cross-mounted with bolt, hook or trolley suspension in 250, 500, 1000 or 2000 lb. capacities.

Send for Hoist Bulletin today . . . and request a Shepard Niles representative to call. He'll give you the facts on the complete Liftabout-Jr. line . . . help you select the hoist with the right capacity and controls for your lifting job.

America's Most Complete Line of Cranes and Hoists since 1903



CRANES
Overhead: Top Running, Inner Running, Under Running, Floor or Cab Operated.



HOISTS
Operated from Cab, Floor or Pulpit.

SHEPARD NILES
CRANE AND HOIST CORPORATION
1858 Schuyler Ave., Montour Falls, N.Y.

For more details circle NED-729 F5 on enclosed inquiry slip

Get this *free* stock list of small screws mailed to you regularly every 30 days . . . *automatically!*

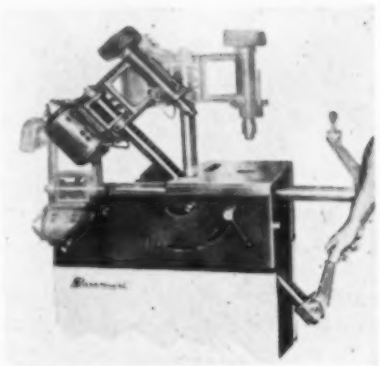
It gives you a monthly report of "in stock" slotted and Phillips head machine and tapping screws plus machine screw nuts. Use it as your "fastener warehouse".

This "stock report" covers Lamson's regular inventory . . . not surplus. And it's yours free *every month.* Just write and ask to be put on the mailing list.

The LAMSON & SESSIONS Co.
1971 West 85th St. • Cleveland 2, Ohio
Plant at Cleveland and Kent, Ohio • Birmingham • Chicago

▲ For more details circle NED-730 F5 on enclosed inquiry slip ▲

MULTIPURPOSE WOODWORKING TOOL combines saw, drill press and lathe



Wide variety of woodworking operations is possible with this Paramount Workshop. It is readily converted by means of attachments to perform circular sawing, vertical and horizontal drilling, turning, sanding, grinding and shaping. Pivoted Magic Boom is a tubular column that slides, rotates and tilts in a pinch-lock bearing block. Boom is equipped with a ½-hp ball bearing motor, spline-drive spindle and step pulleys for spindle speeds from 825 to 4050 rpm. Standard equipment includes ½-in. jacobs chuck, tool rest, combination saw blade with arbor pulley, fence, miter gage, two V-belts, drive and cup centers and sanding disk. Price is $279.50, with motor. Made by **Ideal Metal Products, Inc.,** Dept. ED, 69 W. Washington St., Chicago 2, Ill.

▲ For more details circle NED-733 F5 on enclosed inquiry slip ▲

How to tell a "Better Mouse Trap" from a "Profit Trap"

Count BOTH and 1,001 Other Items with

VARY-TALLY
Multiple-Unit Reset Counter

Compactly set up on stands in tiers, the Vary-Tally can be supplied in any of 66 combinations, up to 6 banks high and 12 units wide with a minimum of 2 units wide. Also single units.

To know WHICH products, styles, sizes or flavors are "hot" and WHICH are dragging their feet — COUNT! Whether you are a manufacturer or merchant, distributor or dealer — Vary-Tallies can tell you quickly How Many of What, Where and When — Now as against Last Year, Last Month or Yesterday. Traffic engineers, estimators, laboratories, warehouses, offices, restaurants, mail and phone order departments, payroll people and many others find keeping score is no chore with a Vary-Tally. What do *you* want to count? Write for news sheet and prices.

VEEDER-ROOT INC.
Hartford 2, Conn.

Chicago 6, Ill. • New York 19, N. Y.
Greenville, S. C. • Montreal 2, Canada
Dundee, Scotland
Offices and Agents in Principal Cities
"THE NAME THAT COUNTS"

▲ For more details circle NED-736 F5 on enclosed inquiry slip ▲

FLEXPIPE...new standard flexible pipe connector

- permits travel
- absorbs vibration
- connects misaligned ports

EASY TO INSTALL . . . standard male pipe fittings at each end thread quickly to companion fittings. Saves time and materials—Flexpipe* takes the place of rigid connections made up with elbows, couplings and short runs of pipe. Conveys air, gas, oil, steam or water.

Seamless, tin bronze tubing, corrugated for flexibility. 100% tight. No packing. Wire braid covering for extra strength. Low cost. Available in diameter sizes ¼" through 2", in over-all lengths 8" through 28".

SOLD BY leading plumbing supply houses. For literature on standard sizes and lengths, write to *The American Brass Company, American Metal Hose Branch, Waterbury 20, Conn.* In Canada: *The Canadian Fairbanks-Morse Co., Ltd.* 55205

*Trade Mark

Flexpipe
AN
ANACONDA®
PRODUCT

▲ For more details circle NED-731 F5 on enclosed inquiry slip ▲

INDUSTRIAL COMPUTER for checking sheet production

Instantaneous presentation of product information by this model D-5 AccuRay production analyzer permits close control of process equipment and aids in the supervision of operating personnel involved in the production of sheet materials. It divides total production into five weight or thickness classifications and shows the amount of down-time. Classifications consist of premium, good and reject. Units of measurement are feet or yards or multiples thereof. Machine is also suited for controlling other than sheet or strip materials such as steel, paper, rubber and plastics. Made by **Industrial Nucleonics Corp.,** Dept. 11, 1205 Chesapeake Ave., Columbus 12, O.

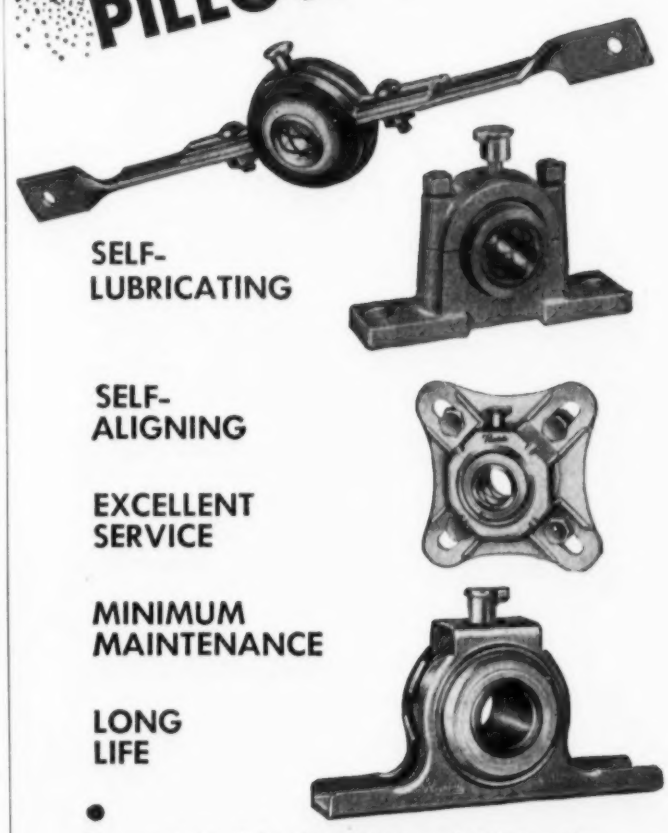
▲ For more details circle NED-734 F5 on enclosed inquiry slip ▲

Industrial Wire Cloth

Cambridge Wire Cloth Co.—4-page illustrated bulletin No. 113 details typical applications of industrial wire cloth made of any metal or alloy. Cloth is available with openings ranging from 20 x 250 mesh up to 4 in. Typical weaves or constructions are pictured.

▲ For more details circle NED-735 F5 on enclosed inquiry slip ▲

FOR *Automatic Protection* USE *Randall* SELF-LUBRICATING PILLOW BLOCKS



SELF-LUBRICATING

SELF-ALIGNING

EXCELLENT SERVICE

MINIMUM MAINTENANCE

LONG LIFE

The proven design of Randall's self-aligning, self-lubricating pillow blocks is in keeping with today's trend toward more and more automatic type machinery and equipment. Every Randall pillow block utilizes the exclusive Randall "deep well"® ball assembly that offers a unique double lubricating principle. It combines Randall's exclusive graphited bearings with grease or oil type lubricants which assures controlled, automatic lubrication for long periods of trouble-free operation.

If you use bearings on your equipment it will pay you to investigate Randall . . . the most complete line of graphited bronze sleeve bearing pillow blocks available anywhere. Write us, today!

BRONZE BAR STOCK
BRONZE BUSHINGS
PILLOW BLOCKS
SHEET LUBRICATOR
GRAPHITED BEARINGS
THRUST WASHERS
SAFETY COLLARS
BRONZE CASTING

Randall

RANDALL GRAPHITE BEARINGS, INC.
1007 S. GREENLAWN AVENUE, LIMA, OHIO

▲ For more details circle NED-737 F5 on enclosed inquiry slip ▲

WHAT IS YOUR NAILING PROBLEM?

FMC HAS THE ANSWER

Many of the problems of industrial nailing which are troublesome to you today, may have already been successfully studied and solved by FMC nailing machine design and application engineers.

Problems arising from countless combinations of woods, materials, nailing patterns, speeds, space, manpower, pressures, feeds, mechanics, hydraulics and other variables have been resolved by our engineering department. From hundreds of case histories FMC can counsel with you on all phases of automatic nailing.

Why not take advantage of a backlog of 50 years of practical nailing experience to solve your nailing and box making problems.

Hand us your nailing problem. We believe we can give you a successful FMC answer to it from the scores of types, sizes and models of FMC nailing machines which have been built and are in successful operation by firms like yourself—who once also had a nailing problem!

WRITE, giving us full details—or request Bulletin

FOOD MACHINERY
AND CHEMICAL CORPORATION
NAILING MACHINE SECTION
RIVERSIDE, CALIFORNIA

NM-155

Send coupon for full details

FOOD MACHINERY AND CHEMICAL CORPORATION
NAILING MACHINE SECTION
RIVERSIDE, CALIFORNIA
Please send information on Nailing Machine Checked
☐ General Purpose Nailer
☐ Pallet Maker
☐ Multiple Spindle Drive Screw Driver
NAME_____
COMPANY_____
ADDRESS_____
CITY_____ STATE_____

▲ For more details circle NED-732 F5 on enclosed inquiry slip ▲

THE HOTTEST THING IN CARTRIDGE HEATING-UNIT HISTORY

THE NEW WATLOW

FIREROD

CARTRIDGE

5 TIMES MORE HEAT than ANY standard cartridge heating unit!

A New high in Watt Densities and temperatures . . . plus l-o-n-g-e-r cartridge life.

For convincing test-proof and other information, write for new FIREROD Bulletin.

WATLOW ELECTRIC MFG. CO.
1374 FERGUSON AVE.
SAINT LOUIS 14, MO.

▲ For more details circle NED-738 F5 on enclosed inquiry slip ▲

Got a pumping problem?

TRY THE PROBLEM-SOLVING MOYNO® PUMP!

Yes, this amazing pump is the best friend a man with a pumping problem ever had! It's like no other pump: as the illustration above shows, the Moyno pump actually works on the principle of a high-speed, precision screw-conveyor. Progressing cavities, formed by a machined rotor turning inside a synthetic rubber stator, give you positive displacement.

These cavities move smoothly: they don't squeeze the material . . . they can't stick or gum up. In addition to liquids and pastes, Moynos successfully pump such varied and unlikely materials as potato salad . . . clay . . . abrasive-laden slurries . . . chow mein!

More brief facts about the Moyno

Moynos are available to pull up to 29" of vacuum while discharging under pressure. Big Moynos pump up to 250 gpm, pressures to 600 psi. Pump equally well in either direction.

Won't churn . . . won't foam . . . won't aerate or vapor-lock. Only one moving part. No valves or pistons to cause trouble.

These Moyno features may help solve *your* pumping problem. If the material you handle will go through pipe, find out more about the world's most versatile pump!

Industrial-type Moyno . . . suitable for application on heavy hydraulic machinery . . . or in materials- or food-handling processes.

ROBBINS & MYERS, INC.
SPRINGFIELD 99, OHIO • BRANTFORD, ONTARIO

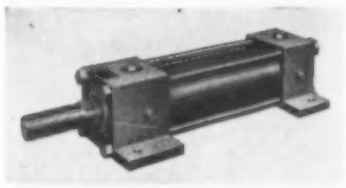
Mail Coupon for Free Booklet

Robbins & Myers, Inc. ND65
Pump Division, Springfield 99, Ohio
Please send Bulletin 30C, showing more details on construction and operation of Moyno Pumps.

Name _____ *Title* _____
Company _____
Address _____
City _____ *State* _____

▲ For more details circle NED-739 F5 on enclosed inquiry slip ▲

AUTOMATION CYLINDERS for air or hydraulic service



Series of automation cylinders which comply with JIC pneumatic and hydraulic standards will operate on air pressures up to 200 psi, or hydraulic pressures up to 2000 psi. Cup seals on piston and rod assure positive sealing at low air pressures; heavy web sections at maximum pressures. Single cartridge contains both piston rod seal and rod wiper. Cylinders are offered in bore sizes from ½ to 8 in. and in seven different mounting styles, including flange, swivel, base and tie-rod mounts. Any stroke length can be specified. Special requirements can be met with different accessories and modifications. Made by **Bill-Dee Corp.**, Automation Products Div., Dept. N, 405 Crystal Lake Rd., McHenry, Ill.

▲ For more details circle NED-740 F5 on enclosed inquiry slip ▲

FILLING & WEIGHING MACHINE delivers 8-oz to 25-lb fills

Any free-flowing or semifree-flowing material can be handled by the Trescomatic filling and weighing machine. Unit has four types of discharge attachments so that paper bags, plastic bags, boxes or canisters can be filled. Fills ranging from 8 oz to 25 lb can be delivered, and changeover from one weight to another is made quickly. Machine can fill up to 30 packages per minute and can be used for seeds, fertilizer, chemical, small parts, pipe fittings and pellets. Machine can be fully automatic with or without time delay on discharge for weight check, semiautomatic or manual filling operations. It occupies 2 x 4-ft floor space and has 30-in. leg adjustment. Made by **Trescott Co.**, Dept. NE, Fairport, N. Y.

▲ For more details circle NED-741 F5 on enclosed inquiry slip ▲

Gages, Dies, Jigs & Fixtures

Ehrhardt Tool & Machine Co.—Combination of skills, facilities and experience that has made this company a successful producer of high precision gages, tools, dies, jig and fixtures is described in 24-page brochure "Triple Plus." Containing many photographs by ex-*Life* photographer William Vandivert, it illustrates plant facilities, typical pieces of work and plant personnel.

▲ For more details circle NED-742 F5 on enclosed inquiry slip ▲

Colonial Develops SPECIAL RUBBERS

FOR *Tough* INDUSTRIAL APPLICATIONS

CONSULT OUR ENGINEERS ON YOUR RUBBER PARTS PROBLEMS AT NO OBLIGATION

The Colonial Rubber Company has the experience, the technical staff, and the facilities to meet your *special* requirements in industrial rubber parts. Our service is fast, efficient and precise for three important reasons:

Colonial Operates Its Own
- RUBBER RESEARCH LABORATORIES
- DIE-MAKING MACHINE SHOP
- PARTS PRODUCTION PLANT

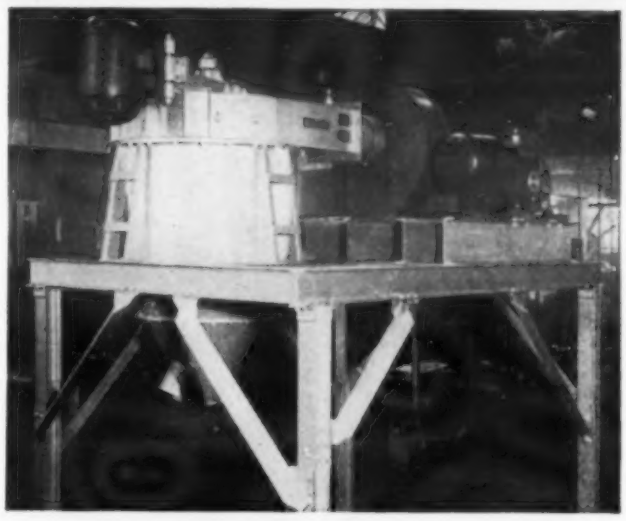
Send for Free Illustrated Booklet

Contains complete details on Colonial's custom rubber compounding and molding . . . shows *why* manufacturers can use this service to advantage.

2300

Colonial Rubber Co.
Ravenna, Ohio

▲ For more details circle NED-743 F5 on enclosed inquiry slip ▲



New Type STURTEVANT Air Separator
Recovers Fines in Micron Ranges

Now the famous Sturtevant Whirlwind Air Separator, so widely used throughout industry for fast recovery of fines, has been specially designed to "pick-off" classified materials such as pigments, limestone fillers, plastics, oyster shells, etc., in micron sizes.

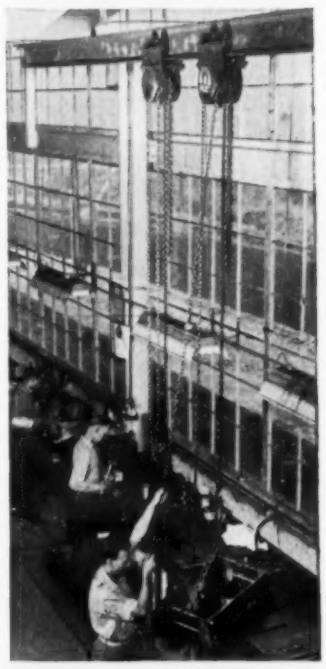
These highly efficient air separators select a continuously uniform product of desired fineness. Used in a closed circuit with grinding mills, they increase production, cut power costs.

Large feed opening, rugged construction, ease of adjustment, low power consumption assure economy of operation and minimum upkeep. Write for further information.

STURTEVANT MILL COMPANY
114 Clayton St., Boston 22, Mass.

▲ For more details circle NED-744 F5 on enclosed inquiry slip ▲

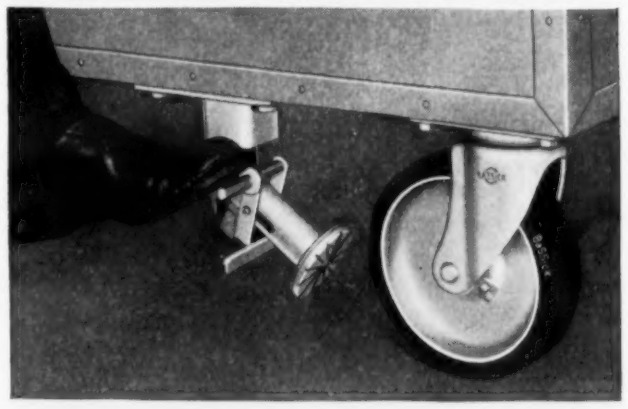
Peerless Packet Trolley Hoists cut handling time on assembly line



These integrated hoists and trolleys simplify handling of heavy parts on assembly lines. The worker just picks up the load, rolls it along an I-beam, lowers it on the bench top. Peerless Packet Trolley Hoists make lifting easy, cut handling time materially, require little maintenance. For more information about these time-saving and labor-easing trolley hoists, ask your authorized industrial distributor for Bulletin P-5. Or, if you prefer, write us.

THE HARRINGTON COMPANY
Makers of Hoists Since 1876
GRAVERS ROAD AT THE TURNPIKE, PLYMOUTH MEETING 16, PA.

▲ For more details circle NED-745 F5 on enclosed inquiry slip ▲



New "Hi-boy" position lock

Three times as much floor clearance as previous locks — that's the big news about this new Bassick retractable position lock.

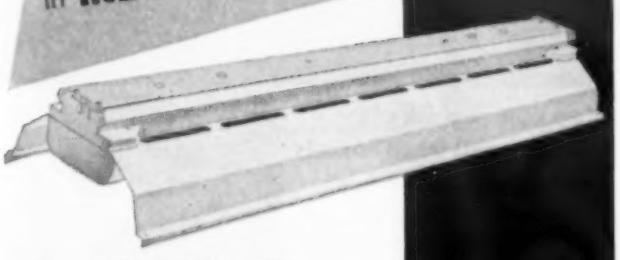
Providing 3¼" ground clearance, it's your best bet for portable work platforms, floor trucks, engine stands and any mobile equipment. Positive locking action for safe positioning. Thick neoprene pad facing grips floor tightly but won't mar it. Write for free folder No. PL-55. THE BASSICK COMPANY, Bridgeport 2, Conn. *In Canada:* Belleville, Ont.

Bassick A DIVISION OF STEWART SW WARNER
MAKING MORE KINDS OF CASTERS . . . MAKING CASTERS DO MORE

▲ For more details circle NED-746 F5 on enclosed inquiry slip ▲

Wheeler 'D' LINE

the "NEW LOOK" in INDUSTRIAL LIGHTING



1 MORE UPLIGHT to reduce contrast for seeing comfort. Exceeds new RLM Standards.

2 MORE EFFICIENCY to start with and higher maintained efficiency due to self cleaning features.

3 MORE PROTECTION for lamp holders to minimize dirt and moisture problems.

Wheeler REFLECTOR COMPANY
275 CONGRESS ST. BOSTON 10, MASS.

Distributed Exclusively through Electrical Wholesalers

For more details circle NED-747 F5 on enclosed inquiry slip

BATTERY-OPERATED SKID TRUCK in capacities up to 6000 lb

Walkie-type electric truck for handling either pallets or skid platforms has built-in 175-amp-hr battery and a 20-amp-hr output charger. Battery which has enough capacity for 3 to 4 hours of normal work is charged by plugging charger into any 110-v, single phase 60-cycle outlet. Charger automatically shuts itself off when battery is fully charged. Drive unit is double reduction gear type with traction speeds of 3 mph empty, 2.3 mph loaded. Brake is spring-applied and electrically released so that truck can be operated with handle in vertical position in narrow aisles. Capacities range up to 6000 lb in both pallet and platform types. Made by **Lewis-Shepard Products, Inc.**, Dept. R-11, Watertown 72, Mass.

For more details circle NED-750 F5 on enclosed inquiry slip

CHICAGO TRAMRAIL

JIB CRANES

Faster Handling AT LESS COST

360° SWING

SELF-SUPPORTING

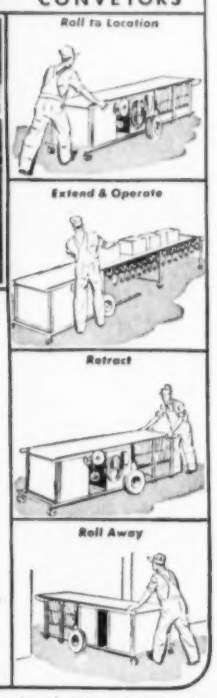
CAPACITIES FROM 1½ TO 5 TONS

A complete line of Jib Cranes including Wall Bracket Type with 180° rotation, Self-Standing Column Type with 220° rotation; also heavy duty and light duty Self-Supporting Type with 360° rotation. Mast type with top and bottom supports. Top bearing is bronze and a tapered precision bearing is at bottom.

CHICAGO TRAMRAIL CORPORATION
1320 South Kostner Avenue • Chicago 23, Illinois
OVERHEAD CRANES • STAK-RAK CRANES • MONORAIL SYSTEMS AND RACKS

For more details circle NED-753 F5 on enclosed inquiry slip

MODERN TIME AND COST SAVERS BUILT BY... Standard GRAVITY & POWER CONVEYORS



SAVE TIME LOADING — UNLOADING WITH THE

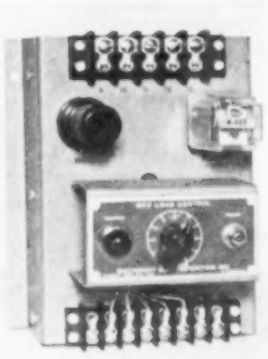
E-X-T-E-N-D-O-V-E-Y-O-R

This compact, mobile, easily maneuverable power-belt conveyor unit extends to 46 ft. in either direction and retacts to 9 ft. 10 in. Reaches into cars, trucks, trailers. Handles boxes, bags, bundles, cartons, crates, cases weighing up to 150 lbs. Available in two models — 1 way stretch and 2 way stretch — and 4 sizes. Write for Extendoveyor Bulletin—address Dept NED-65.

STANDARD CONVEYOR COMPANY
General Offices: North St. Paul 9, Minn.
Sales and Service in Principal Cities

For more details circle NED-748 F5 on enclosed inquiry slip

LOAD CONTROL RELAY protects machinery from overloads



Slight change in input current to a machine or process drive motor can be detected by the MEK-2128 load control relay. Control can be used to correct the difficulty, stop the machine, adjust the feed or sound an alarm. It is effective in protecting tapering rolling-mills, punch presses and milling machines from damaging overloads, and can also be used to indicate end of spark-out periods, to control feeds, to indicate wheel-glazing on grinding shells, and to control injection molding presses. Units are designed to detect increases in current above preset load, although controls are available to detect load decreases, or changes both above and below desired limits. Made by **Machinery Electrification, Inc.**, Dept. NED, 35 Hudson St., Northboro, Mass.

For more details circle NED-751 F5 on enclosed inquiry slip

Carbide Blanks, Tools & Inserts

Vascoloy-Ramet Corp.—Triangular, square and round "throw-away" inserts are included in line of carbide blanks, tools and inserts covered in 44-page illustrated catalog VR-442. Technical information on proper grade selection, specifications and diagrammatic sketches are included.

For more details circle NED-752 F5 on enclosed inquiry slip

Performing Seal!

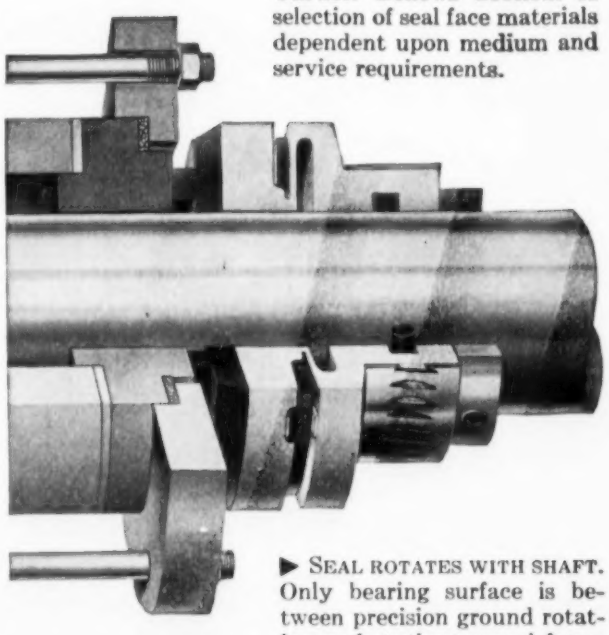
Service that no other Mechanical Seal can match

Pump difficult chemicals . . . with drop-tight service over longer periods of time. That is what Chemiseal's chemically impervious TEFLON, pressure-balanced bellows design offers you.

The ideal Mechanical Seal that has no equal in handling acids, alkalies, solvents, hydrocarbons, alcohols—clear liquids, slurries and tarry materials.

FEATURES

▶ CHEMICALLY IMPERVIOUS TEFLON Bellows Section. A selection of seal face materials dependent upon medium and service requirements.



made of du Pont TEFLON

▶ SEAL ROTATES WITH SHAFT. Only bearing surface is between precision ground rotating and stationary seal faces. Low friction load on shaft. Lower power cost. Drop tight service.

▶ NO SCORING OF SHAFTS and Chemiseals work satisfactorily on shafts previously scored by other seals or packing.

▶ PRESSURES at the seal up to 100 psi at 75°C or 75 psi at 100°C.

▶ SIZES from ⅞" to 2⅛". Other sizes for special applications.

▶ MAXIMUM LENGTH, all seals 2¾".

Write for Bulletin No. MS-954.

UNITED STATES GASKET COMPANY, CAMDEN 1, NEW JERSEY

USG FABRICATORS OF FLUOROCARBONS & OTHER PLASTICS
Representatives in principal cities throughout the world

For more details circle NED-754 F5 on enclosed inquiry slip

The Best $183.60 investment you can make for saving man hours

THE Economy SHOPLIFTER

A 500 lb. lifter of a thousand uses about the plant. So low in cost you can afford to have a Shoplifter at every job throughout the plant where a machine of this type can be used.

A rugged simple machine with few moving parts; no complicated hydraulic units to get out of order. Structural steel welded construction, built to last a lifetime with practically no up-keep expense. Has big built-in safety overload factor.

Platform lift 4' 6" yet overall height will clear any standard doorway. Width 24", moves easily between machines or in narrow aisles. Spur gear hoist unit lifts loads with only 20 lb. crank pressure. Automatic friction disc clutch holds loads securely at any height.

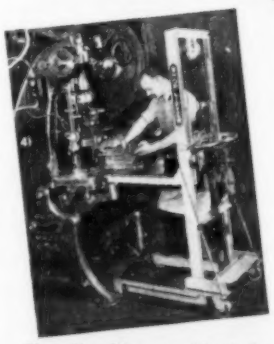
Type D — 500 lb. capacity.....$183.60
Type DX — 1000 lb. capacity..... 350.00
Type DX — 2000 lb. capacity..... 420.00

The lowest priced lifter of its type

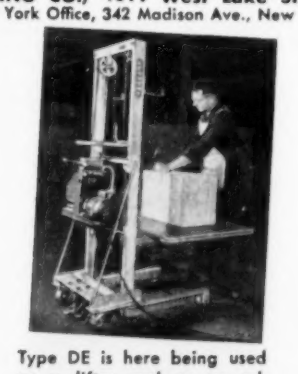
Try out a Shoplifter, and you will wonder how you ever got along without one before. Address Don Suhr for personal service.

ECONOMY ENGINEERING CO., 4519 West Lake Street, Chicago 24, Illinois
New York Office, 342 Madison Ave., New York 17, N. Y.

Moving heavy machines with a type D Shoplifter.



The Shoplifter is ideal for moving dies to the press.



Type DE is here being used as a lifter and as an adjustable work bench.

Shoplifter used to load pick-up truck.

Special type D Shoplifter lifting auto transformer into switch cabinet.

For more details circle NED-749 F5 on enclosed inquiry slip

An

ELEFILAMENT

never

forgets

Do

You?

CHAMPION Lamps

Starting small, the Elefilament glows and grows until he becomes a bulky barrier to effective and economical lighting, unless you set a trap for him by maintaining good lamps and good lamp care at all times.

By good lamps we mean CHAMPION Lamps, made specially to meet the highest standards of industrial lighting.

By good lamp care we mean the simple, effective maintenance measures described in the Champion Maintenance Manual, copy of which is yours for the asking.

CHAMPION LAMP WORKS

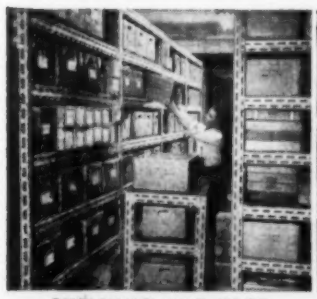
304 Lynnway **Lynn, Massachusetts**

▲ For more details circle **NED-755 F5** on enclosed inquiry slip ▲

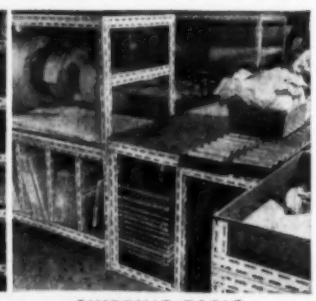
frame it with DEXION!

New DO-IT-YOURSELF framing material has scores of applications

Anyone in your plant who can handle a wrench and a saw (or Dexion Cutter) can build with this precision-made, galvanized steel angle. And DEXION is so easy to use or re-use! There's no drilling—no welding—no waste. DEXION is strong and rigid—lasts a lifetime—and the price is amazingly low.



SHELVING AND CART



SHIPPING TABLE

PRODUCTION RACK

STORAGE RACK

Here's why you'll want DEXION Slotted Angle over any other framing material

1. Simple to connect.
2. Easy to cut.
3. Strong and rigid.
4. Re-usable.
5. Easy to measure.
6. Easy to store.

DEXION is a packaged product, ten pieces to a package, each piece 10 feet long. Three types, with dimensions of 3" x 1½" x .080"; 3" x 1½" x .104"; 2¼" x 1½" x .080".

GET THE EXCITING NEW DEXION IDEA BROCHURE,

which gives you full information—and shows what scores of manufacturers are building with this amazing framing material. Write direct to the address shown below.

DEXION DIVISION

ACME STEEL

ACME STEEL COMPANY

Dept. 6F, 2840 Archer Avenue, Chicago 8, Illinois

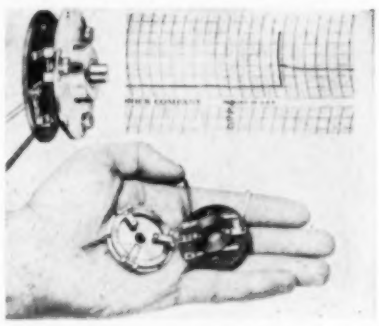
▲ For more details circle **NED-756 F5** on enclosed inquiry slip ▲

TILTING ARBOR SAW cuts 5 in. deep with 14-in. blade

Rigid motor - and - arbor mounting on the 14-in. Light-Heavyweight saw permits motor and arbor to tilt as a unit. Guard and splitter remain automatically aligned with the saw blade. Leaves of the guard operate independently, providing full protection, even on 45-degree angle cuts. Saw has a 14-in. blade which cuts 5 in. deep. Cuts of 3⅛ in. can be made at 45-degree angles. Table is 38¾ in. deep and 48 in. wide. Additional features are anti-kickback pawls on the guard, handwheel tilting of arbor and motor, miter gage on table and operation with 5-hp, 220-v, three-phase or 3-hp, 220-v, single-phase motor. Made by **Walker-Turner Div.,** Kearney & Trecker Corp., 129 Berkman St., Plainfield, N. J.

▲ For more details circle **NED-757 F5** on enclosed inquiry slip ▲

ROTARY SNAP SWITCH centrifugal type operates rapidly



Complete and instantaneous cut - in or cut-out at a predetermined speed is characteristic of the Syncro-Snap rotary switch which results in a nonfluttering action. Chart illustrated shows unit calibrated to cut-out at 7400 rpm had completed its switching action within 3 rpm of shaft. Use can be as an overspeed or underspeed limit control, or in parts to limit high and low speeds for a single operation. Applications as a safety device can be in turbines, rotary converters and series wound motors. They detect rotation speed alone, regardless of voltage or load and are available for any speed to 13,000 rpm. Made by **Torq Engineered Products, Inc.,** 1062 Interstate St., Bedford, O.

▲ For more details circle **NED-758 F5** on enclosed inquiry slip ▲

Commercial Blind Rivets

Townsend Co.—Originally developed for the aircraft industry, pull type blind rivets are now available in commercial grade for use in all types of fastening and assembly operations. Described in bulletin TL-99, TC rivets are installed by one man from one side of work by a special gun which pulls the stem into the hollow shank. This upsets the head on the blind side and fills the hole. Rivets are usable in maintenance, production and repair work.

▲ For more details circle **NED-759 F5** on enclosed inquiry slip ▲

Don't junk leaky valves-*Reseat 'em!*

Pays for itself on the first 2 jobs!

Reseats flat and tapered seat globe or angle valves—all bibbs, faucets—quickly and accurately. The saving, over tearing out and renewing leaky valves and fixtures, is tremendous.

Cutters operating under screw feed, leave worn, scored seats glass smooth, level, absolutely tight. The cutter rotates on a level plane and is advanced by slight turns of the feed screw until the job is done.

A guide pilot centers each cutter; a tapered cone centers each spindle. Perfect alignment is inevitable. Cutters guaranteed. Write for literature!

2" for ¼" to 2" valves and ¼" to ¾" bibbs $47.75

3" for ¼" to 3" valves and ¼" to ¾" bibbs $62.50

M. B. SKINNER COMPANY, South Bend, Indiana

▲ For more details circle **NED-760 F5** on enclosed inquiry slip ▲

You can see why Magcoa rail Dockboards perform better . . .

Look underneath to see important *extras* that make Magcoa rail Dockboards perform better *and longer:* Magcoa locking members and Magcoa structural members.

Magcoa locking members are extruded magnesium channels extending the full distance required for a safe, slip-proof fit between rail car and dock. Outer edges are precision welded to the bottom of the Dockboard; rugged magnesium plate is welded to each end of the channel for extra strength to withstand the brutal repeated thrusts of high speed lift trucks and heavy loads.

Magcoa structural members are engineered to give maximum distribution of load weight across the entire Dockboard. Size and number of structural channels or I-beams used is determined by your specific loading requirements. Structural members are always positioned *within* the end limits of the locking members for protection.

Write for bulletin, "Look *Under* Magcoa Dockboards."

MAGNESIUM COMPANY OF AMERICA

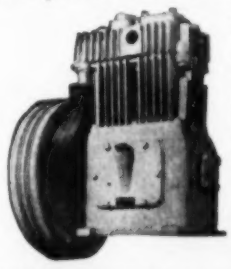
MATERIALS HANDLING DIV. • EAST CHICAGO 6, IND.

▲ For more details circle **NED-761 F5** on enclosed inquiry slip ▲

QUINCY DRI-R-AIR AUTOMATIC TANK DRAIN

With a Quincy Dri-R-Air Automatic Tank Drain you don't have to depend on manual draining. Dri-R-Air does the job automatically every time the compressor starts or stops.

Dri-R-Air tank drains can be installed on any compressor with bleeder or pressure unloader . . . or supplied with your new Quincy Compressor.



Write Dept. NE-42, Quincy Compressor Co., Quincy, Illinois, for information and prices.

Quincy COMPRESSORS

QUINCY COMPRESSOR CO., Quincy, Illinois

Makers of The World's Finest Air Compressors

▲ For more details circle **NED-762 F5** on enclosed inquiry slip ▲

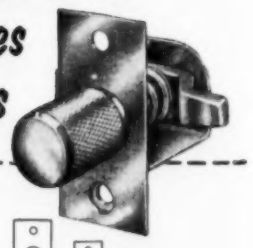
THIS DOOR FASTENER

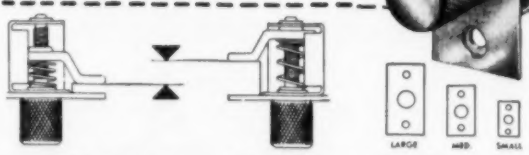
...with the turn of a knob...

automatically adjusts to

variable thicknesses

variable pressures





with just a turn of the knob . . . thick or thin . . . as light or as tight as desired

Pre-assembled for fastest installation. Three standard body sizes with a choice of pawls covering a wide range of grip lengths.

Also available are left-hand models, fixed adjustable pawls and flush screwdriver-operated heads.

Write for full information. SOUTHCO DIVISION, SOUTH CHESTER CORPORATION, 243 Industrial Highway, Lester, Pa.

SOUTHCO FASTENERS

©1955

Whenever two or more parts are fastened together.

▲ For more details circle **NED-763 F5** on enclosed inquiry slip ▲

YOUR HANDIEST ONE POUND OF PIPE THREAD COMPOUND

Here is a new and convenient way to keep "John Crane" *Plastic Lead Seal on hand for water, steam, gas, refrigerant and petroleum service.

Just unscrew the permanent type applicator top, scrape the flat shank along the rim of the can to remove any excess, then use the handy brush to work the compound thoroughly into the threads. When finished, replace the cap and store it away in one neat can. There's no fuss, no cleaning, no mess . . . and no waste—since the can-length applicator wipes the bottom clean of contents.

PLS seals permanently, yet never hardens, permitting connections to be easily broken after years of service. PLS withstands pressures to 6000 psi., temperatures to 500°F . . . is approved by Underwriters' and Butane-Propane Institute of Louisiana.

Send for a trial sample today. Crane Packing Co., 1811 Cuyler Avenue, Chicago 13, Illinois. *In Canada: Crane Packing Co., Ltd., 617 Parkdale Ave., N., Hamilton, Ont.*

JOHN CRANE CRANE PACKING COMPANY
OFFICES IN ALL PRINCIPAL CITIES

▲ For more details circle **NED-764 F5** on enclosed inquiry slip ▲

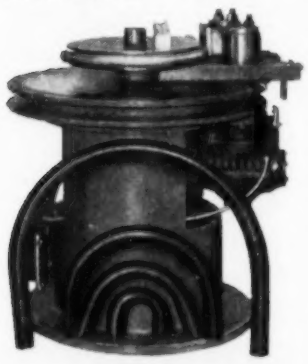
reach!

A NEW PEAK IN BENDING EFFICIENCY

Pedrick Production Benders offer new standards of efficiency and economy for all pipe, tube and structural bending. Even the most difficult bends can now be made on a production or jobbing basis.

Let us know your problem—and supply a cost-cutting solution.

Write PEDRICK TOOL & MACHINE CO., 3640 N. Lawrence St., Philadelphia 40, Pa. Dept. 6.



FREE "PEDRICK LINE" BULLETIN. WRITE TODAY.

PEDRICK production benders

▲ For more details circle **NED-765 F5** on enclosed inquiry slip ▲

GRINDING WHEEL
high cutting-speed, raised-hub type

Blue Flash raised hub grinding wheel takes advantage of the maximum cutting ability of each abrasive grain, permitting them to penetrate deeply and remove metal rapidly with a minimum of work pressure. This sharpness exists on the entire underside of the wheel, making possible easy grinding and blending of external corner welds and convex surfaces. Wheel has internal and back reinforcement and is designed for all weld grinding and portable cut-off applications. Conforming to wheel specification A-24R-BF, it is available in 7 and 9-in. diameters and 1/8, 3/16 and 1/4-in. thicknesses. Made by **Bay State Abrasive Products Co.**, 1 Union St., Westboro, Mass.

▲ For more details circle **NED-767 F5** on enclosed inquiry slip ▲

EVAPORATIVE CONDENSER
in 16 sizes from 5 to 100 tons

All parts of this Imeco evaporative condenser are made extra heavy to give it strength and long service life. Unit is efficient in dissipating heat that has been absorbed by refrigerant from the space and/or products it cools. To minimize corrosion, pan, casing, coil, coil supports, fan wheels, fan housing, eliminators and pump strainers are all hot dip galvanized after fabrication. Condenser is made in 16 sizes ranging from 5 to 100 tons. Doors are placed for access to spray nozzles and eliminators, and all sides are removable, allowing coils to be reached easily. Strainer is on outside to facilitate cleaning. Made by **Industrial Mfg. & Engineering Co.**, 3034 W. Belmont Ave., Chicago 18, Ill.

▲ For more details circle **NED-768 F5** on enclosed inquiry slip ▲

High Speed Portable Electric Tools

Precise Products Corp.—20-page illustrated catalog FGH-2 and 4-page price list is descriptive of complete line of precision high speed electric grinder-millers, automatics, power quills, drill presses, milling machines, milling machine accessories, speed lathes and accessory equipment. Tools develop spindle speeds to 45,000 rpm, and permit machining at tolerances within 0.0001-in.

▲ For more details circle **NED-769 F5** on enclosed inquiry slip ▲

AIR ARM DIVISION Westinghouse **BOOSTS PLATING OUTPUT**
holds rejections to virtually zero

uses POWERS
TEMPERATURE CONTROLS

Plating gold, silver, copper, tin, cadmium and zinc; dual anodizing; cleaning, aluminum, magnesium and steel electronic parts all are temperature controlled by Powers, in the new Baltimore plating plant of Westinghouse's Air Arm Division.

And Powers Self-Operating Temperature Controls help maintain exceptional plating quality. Rejections are virtually zero.

Your plating operation can profit from the use of Powers Temperature Controls. Contact the Powers office nearest you, or write us direct for Bulletin 330. (c26)

THE POWERS REGULATOR CO.
Skokie, Ill. • Offices in 60 Cities • See Your Phone Book

Over 60 Years of Automatic Temperature and Humidity Control

▲ For more details circle **NED-770 F5** on enclosed inquiry slip ▲

REDUCE YOUR REPLACEMENT COSTS . . . BUY MONARCH PREMIUM QUALITY TIRES AT STANDARD PRICES.

Tires . . . a small item in the initial cost of a materials handling truck . . . are a big item in maintenance budgets if they require frequent replacement.

To give you longer tire life, MONARCH uses only the best materials . . . even better than those used in *"premium" passenger car tires* . . . in its special solid tire compounds.

When you buy MONARCH tires, you're getting the finest available today . . . and they cost no more than other leading brands.

If economy is your goal . . . MONARCH IS YOUR TIRE!

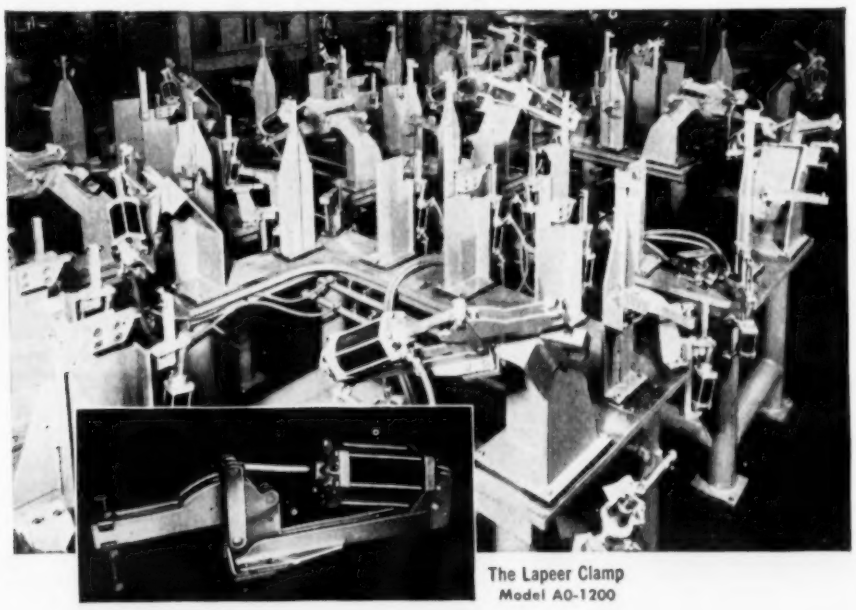
TORTURE TESTS PROVE . . .

. . . MONARCH tires can take a beating and still outperform other brands. For the detailed story, WRITE TODAY FOR BULLETIN TD-200.

6193 MR

THE MONARCH RUBBER COMPANY
260 Lincoln Park • Hartville, Ohio
7-255 General Motors Bldg., Detroit 2, Mich.

▲ For more details circle **NED-771 F5** on enclosed inquiry slip ▲



The Lapeer Clamp
Model AO-1200

Spot Welded
IN 60 SECONDS!

Truck cowl and plenum assemblies for a leading automotive manufacturer are placed into position, clamped, and spot welded in 60 seconds by one operator as a result of these fixtures engineered by the Martin Electric Co., Detroit.

Important to the production record of this installation is the air-operated, toggle-action clamp made by Lapeer . . . 7 on each fixture. Because they go into action so quickly, they save operator time and fatigue. Because they hold the work so rigidly, the manufacturer attains new horizons in quality control.

It's entirely possible that you have a work-holding problem that will be quickly solved by Lapeer. Better write for information—today.

And send for this free catalog.

Manufacturers of a complete line of Stationary and Portable Clamps and Pliers

4238

KNU-VISE PRODUCTS LAPEER MANUFACTURING CO.
3062 DAVISON ROAD • LAPEER, MICHIGAN
WESTERN DIVISION: 422 Magnolia, Glendale, California • CANADIAN DIVISION: Higginson Engr., Hamilton, Ontario

▲ For more details circle **NED-766 F5** on enclosed inquiry slip ▲

UNIT Challenger
... as a CRANE
LIFTS UP TO 8 TONS

Economical IN OPERATION
Efficient IN ITS PERFORMANCE

Here's a handy crane for ALL types of material handling jobs . . . on or off the highway . . . or in the yard. You'll find the UNIT Challenger is built for speed, accuracy and easy handling. It's TOPS in performance, yet economical in operation. And the Full Vision Cab promotes safety. Write for Bulletin C-800.

UNIT CRANE & SHOVEL CORP.
6607 West Burnham Street • Milwaukee 14, Wisconsin, U. S. A.

▲ For more details circle NED-772 F5 on enclosed inquiry slip ▲

USE THIS NEW SAFETY MATERIAL ALL OVER YOUR PLANT

Safety
GRIP-STRUT
NON-SKID—RUGGED—LOW COST

Safety Grip-Strut is a new basic material. All one piece, steel or aluminum, in various sizes and gauges. Sold like lumber, used like lumber and stocked in your storeroom like lumber. Ideal for on-the-job fabricating. Not welded, riveted or expanded. It presents an open space, in a diamond shaped pattern, in excess of 75% of the area for ready access of light and air and gives a positive NON-SKID footing in all directions. Ideal for stair treads, fire escapes, cable trays, work platforms, catwalks, flooring and for original equipment safety treads. Your own mechanics can install it—it's inexpensive, yet permanent and safe.

Now! for greater safety

New Safety GRIP-STRUT stair treads custom made to your exact size . . . Here for the first time is a really SAFE stair or ladder step, combining the proven features of Safety GRIP-STRUT material with a double locked carrier plate to provide additional safety over present types.

Made to your own individual size at the factory, the cost is amazingly low . . . you can buy a standard 18" stair tread in lots of 50 for $2.40 each. Prices proportionately lower in greater quantities.

Distributors in all principal cities. Consult your classified telephone directory.

GRIP-STRUT division
The Globe Company
Manufacturers since 1914
4002 S. Princeton Ave. • Chicago 9, Illinois

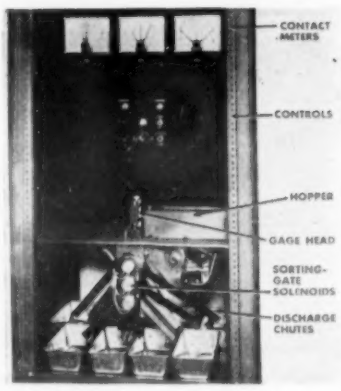
▲ For more details circle NED-773 F5 on enclosed inquiry slip ▲

EXPANSION BELLOWS seals dirt out of joints

Vinyl plastisol material in flexible expansion bellows can be formulated with a wide range of physical characteristics to meet particular requirements. Primary properties are control of hardness and flexibility; chemical resistance to mineral acids, alkalies and petroleum products; excellent aging; and good fatigue and wear strength. Illustrated bellows on automatic pilot control unit withstood flexing tests of over 7 million cycles at room temperature with no visible effect. Material flexes easily at −65° F. Molding technique makes possible extreme variation of wall thickness (see insert). Wide variety of bellows sizes and shapes can be obtained with relatively inexpensive tooling. Developed by **Boonton Molding Co.**, 100 Myrtle Ave., Boonton, N. J.

▲ For more details circle NED-774 F5 on enclosed inquiry slip ▲

GAGING & SORTING UNIT sorts over 3000 parts hourly in five size ranges, oversize and undersize



Parts up to 3 in. long and ¾-in. OD can be gaged and sorted into as many as five specific size categories, plus oversize and undersize, by the Autosort Model 101 gaging and sorting unit. Automatic in operation, it processes them at speeds in excess of 3000 parts per hour. Machine can be arranged for checking length, thickness, OD or any other external measurement.

It can be furnished with any size range desired from 0.0002 to 0.010-in. and for sorting by increments as small as 0.000050-in., depending on the range. Parts to be measured are fed from a hopper by motor-driven fingers and are placed on an anvil under a Par-Ac gage head.

Reading obtained sorts the part as it is pushed off the anvil by the next part. Basic elements of the Autosort are the same for all applications, but mechanical parts are furnished to individual requirements. Made by **Cleveland Instrument Co.**, 735-A Carnegie Ave., Cleveland 15, O.

▲ For more details circle NED-775 F5 on enclosed inquiry slip ▲

TUTHILL SIMPLIFIES PUMP SELECTION

New Cataloging Plan Provides Practical Short-Cuts to Pump Specifications—Helps You Pick The Right Pump for the Purpose

If Your Specifications Call for Pumps for . . .
- LUBRICATION
- HYDRAULIC SERVICE
- TRANSFER
- CIRCULATING
- BURNING OILS

In capacities from 1/3 to 6 g.p.m. and pressures up to 600 p.s.i.

Catalog 101 presents complete data on the Model L series of mechanically-sealed, rotary, internal-gear positive displacement pumps.

TUTHILL PUMP COMPANY
Dependable Rotary Pumps since 1927
939 East 95th Street, Chicago 19, Ill.

Canadian Affiliate
Ingersoll Machine & Tool Co., Ltd. • Ingersoll, Ontario, Canada

▲ For more details circle NED-776 F5 on enclosed inquiry slip ▲

When You Want Washers —Short Runs or Long Runs— and Want Them FAST . . . WHITEHEAD

SHORT RUNS—that's a Whitehead specialty. We have the dies on hand. Service is prompt. LARGE RUNS ALSO. O. D. Sizes from ⅛" to 18"; any I. D. you want; any thickness from .002" to ⅜". Any metal—steel, brass, copper, bronze, aluminum. Special materials, special shapes made to order.

WORTH HAVING: this WHITEHEAD CATALOG

It lists hundreds of washer sizes; also cable clips, pipe, conduit and wire clips; burrs, plugs, spacer shims, retainers, gaskets—write for a copy. 55-1

WHITEHEAD STAMPING CO.
EST. 1903
1669 W. Lafayette Blvd., Detroit 16, Michigan

▲ For more details circle NED-777 F5 on enclosed inquiry slip ▲

Just drill a hole, drive a

SEL-LOK SPRING PIN

These slotted tubular pins eliminate costly tapping, reaming, peening or milling operations. They eliminate losses associated with close tolerances. And they stay put. A full range of diameters and lengths (1/16" x 3/16" to ½" x 4½") is stocked by authorized industrial distributors. See your SEL-LOK distributor or write STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

SEL-LOK SPRING PIN DIVISION
SPS
JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-778 F5 on enclosed inquiry slip ▲

NEW ALL-JACKETED Gate Valve WITH REPLACEABLE SEATS

Valves in line size 1½" through 4" available in cast iron, steel, bronze, Ni-Resist and stainless steel.

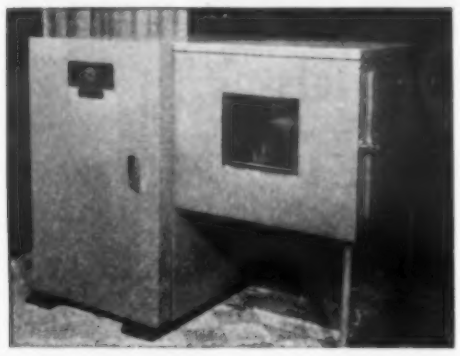
Valves in line size 6" through 12" are made of fabricated steel or stainless steel.

The H&B "all-jacketed" gate valve does not need to be removed from the process line to re-machine the seats. Replacement inserts can be installed in a matter of minutes, minimizing shut-down time . . . Also jacketed pipe, fittings, plug cocks, pumps, meters, flexible hose. Write for Catalog J-50.

HETHERINGTON & BERNER INC.
Engineers, Manufacturers
719 KENTUCKY AVE. INDIANAPOLIS 7, IND.

▲ For more details circle NED-779 F5 on enclosed inquiry slip ▲

AIR CONDITIONED TEST CABINET



RANGE—up to 150° F (dry bulb). With refrigeration, dew point temperatures as low as minus 30° F. Control of relative humidity from 5% to 95% is obtained at all temperatures in this range. Air capacity is 200, 400 or 600 c. f. m. Dimensions are 30" x 28" x 24".

METHOD—Air is saturated in the air-conditioning unit at the required dew point temperature and reheated to the desired dry bulb temperature. No moisture sensitive instruments are needed. Recorders obtain a complete record of conditions.

Write for complete information. Address Dept. ED.

NIAGARA BLOWER COMPANY

405 Lexington Ave., New York 17, N. Y.

▲ For more details circle **NED-780 F5** on enclosed inquiry slip ▲

GET IT CLEANER —FASTER with low-cost VAPOR UPGRADER JUNIOR

Fast, thorough steam cleaning for buildings, shop equipment, rolling stock—at a new low price for top performance, quality. Upgrader Junior's balanced high-impact cleaning solution penetrates cracks and crevices. Grease, clay, mud, tar, all vanish like magic. It's portable, efficient, easy to use. Develops steam in 70 seconds; pressures up to 140 p.s.i.

Distributorships still available in some areas.

Send for NEW Bulletin 594

COMPLETE OUTFIT ONLY $379 F.O.B. FACTORY

VAPOR HEATING CORPORATION
80 E. Jackson Blvd., Chicago 4, Ill.
In Canada: Vapor Car Heating Co. of Canada, Ltd., 65 Dalhousie St., Montreal 3

▲ For more details circle **NED-781 F5** on enclosed inquiry slip ▲

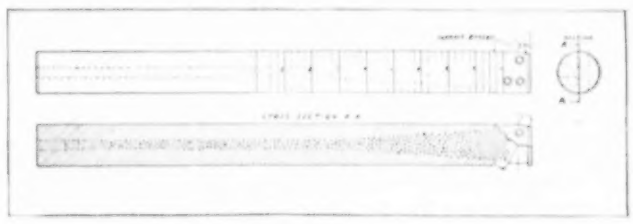
ROLL MARKING MACHINE
speed variable to suit operator

Pneumatic pressure ram for depth of mark and a pneumatic die slide for roll marking round and flat surfaces are combined in the Noblewest series 46 Twin-Ram marking machine. Offering flexibility in work capacity, machine's head can be mounted vertically, horizontally or at an angle as shown. An electro-pneumatic circuit for automatic cycling is incorporated, but semiautomatic cycling can be used for short production runs or for an inexperienced operator. Automatic control can be set to pace an operator. Model 354 shown marks bearing races from 1 to 6 in. diameter and includes an air-operated work ejector for automatic unloading. Made by **Noble & Westbrook Mfg. Co.**, 7 Westbrook St., East Hartford, Conn.

▲ For more details circle **NED-783 F5** on enclosed inquiry slip ▲

BORING BARS
chatter-resistant at high speeds

Elimination of vibration and chatter in line of Fry Tool Mfg. Co. boring bars makes possible their use at high speeds for both light and heavy cuts. Alloy



steel bars are accurately machined externally and internally, heat treated, then packed with vibrationless lead pellets in heavy grease. Inner core is cut at a contour which eliminates vibration without sacrificing strength. As the tool bit can be set at the desired angle, it is not necessary to grind it to the exact angle. Five diameters from 1 to 2½ in. with tool bit sizes from 5/16 to 5/8-in. and lengths from 14 to 26 in. are made. Distributed by **Easco Products**, P. O. Box 587, Ypsilanti, Mich.

▲ For more details circle **NED-784 F5** on enclosed inquiry slip ▲

Iron Phosphating on Steel

Oakite Products, Inc.—"How to Apply Iron Phosphate Coatings to Steel in Preparation for Painting" is a 12-page illustrated booklet which points out that the selection of the treatment depends upon the purpose for which the article is intended. CrysCoat process is described in detail, using diagrams and drawings.

▲ For more details circle **NED-785 F5** on enclosed inquiry slip ▲

LERMER PLASTIC CONTAINERS
Help You Make Satisfied Customers

Package your products in Lermer Plastic durable, handsome containers. They are shatterproof, 75% lighter than glass, available clear or opaque in many colors, can be printed or decorated and are available with metal or plastic closures. Write for complete catalog information and samples. If possible, send along products for particular suggestions.

LERMER PLASTICS, INC.
Pioneers and Specialists in Plastic Containers
514 South Ave., Garwood, New Jersey

▲ For more details circle **NED-786 F5** on enclosed inquiry slip ▲

PUNCH-NOTCH and SAVE-

TOOLSET
HOLE PUNCHING and NOTCHING UNITS

Savings multiply—and fast! when you adapt Toolset Hole Punching and Notching Units to your operations now employing conventional die sets.

The reason? Toolset Units whack away at costs not one, not two, not three, but FOUR ways:

- Low initial cost
- Fast setup by unskilled mechanics
- Eliminate costly fixed die sets
- Tooling reusable setup after setup

. . . these cumulative savings result in a substantial lowering of per piece part cost. And, in most cases, Toolset Units permit you to render faster service . . . a bonus feature in better customer relations.

Toolset Hole Punching and Notching Units are available in seven widths from ¾" to 3½"; throat depths from 4" to 16". Punches available in round, square, rectangular, obround or special shapes as required.

TOOLSET
Division of General Riveters Inc.
779 Hertel Ave. Buffalo 7, N. Y.

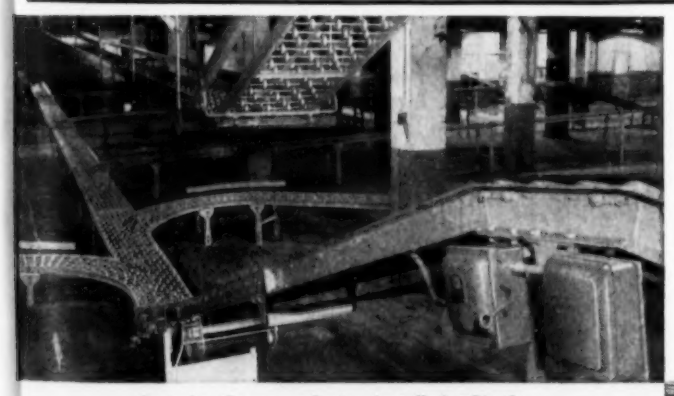
Start cutting costs NOW — Send coupon for Catalog of complete Toolset Line.

Toolset, Division of General Riveters, Inc.
779 Hertel Ave.
Buffalo 7, N. Y.

Gentlemen:
Please furnish a copy of your Catalog on Hole Punching and Notching Units.

Name _____
Title _____
Firm _____
Address _____
City _____ Zone ____ State _____

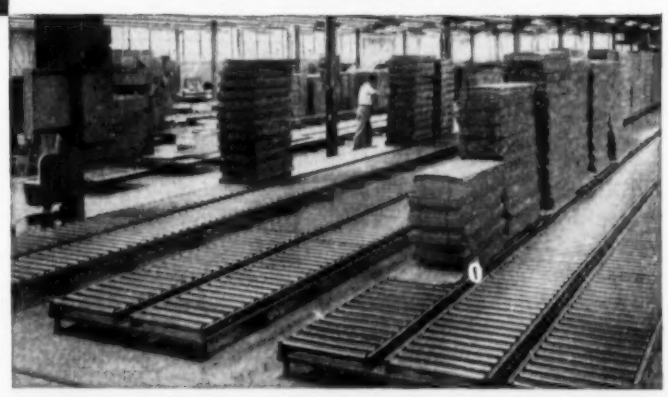
▲ For more details circle **NED-787 F5** on enclosed inquiry slip ▲



Farquhar Conveyor System installed at Piggly-Wiggly Midwest Co., Rockford, Illinois.

Farquhar
power-belt and gravity CONVEYORS Pay Dividends

Here are two fully integrated materials handling systems that illustrate how Farquhar Power-Belt and Gravity Conveyors are engineered to effect savings in a wide variety of bulk or package handling problems. Farquhar is a good buy for you, too. It will pay you to get the facts now!



Farquhar Conveyor System installed at York Container Company, York, Pennsylvania

OLIVER Farquhar CONVEYORS

A. B. FARQUHAR DIVISION
THE OLIVER CORPORATION

Conveyor Dept. E-04
York, Pa.

618 W. Elm St.
Chicago 10, Ill.

Write for Bulletin Nos. 400 & 401 covering Farquhar Power-Belt and Gravity Conveyors.

▲ For more details circle **NED-782 F5** on enclosed inquiry slip ▲

which of these CLEANING PROBLEMS are yours?

- ☐ Insulating coatings
- ☐ Amorphous metal
- ☐ Discoloration
- ☐ Lacquer
- ☐ Plastic flash
- ☐ Rubber flash
- ☐ Glass flash
- ☐ Enamel flash
- ☐ Imbedded metal
- ☐ Lead deposits
- ☐ Carbon
- ☐ Brazing flux
- ☐ Weld spatter
- ☐ Stains
- ☐ Heat treat-scale
- ☐ Radio-active oxides
- ☐ Dirt
- ☐ Grease
- ☐ Oil
- ☐ Rust
- ☐ Varnish
- ☐ Paint
- ☐ Plate
- ☐ Core sand
- ☐ Silicate coatings
- ☐ Excess solder
- ☐ Ceramic deposits
- ☐ Graphite
- ☐ Slag
- ☐ Polishing compound

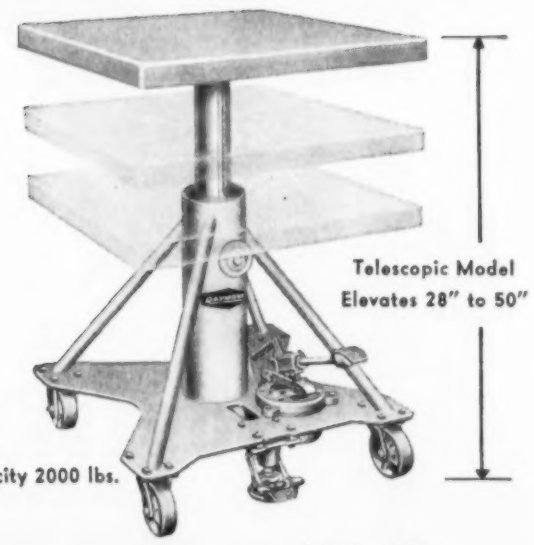
This ad is your coupon. Check off your problem (s) and mail today for free illustrated literature . . . Application data . case history information!

THE CRO-PLATE COMPANY INC.
747-E WINDSOR ST. HARTFORD 5, CONN.

▲ For more details circle NED-788 F5 on enclosed inquiry slip ▲

Raise it! Lower it!

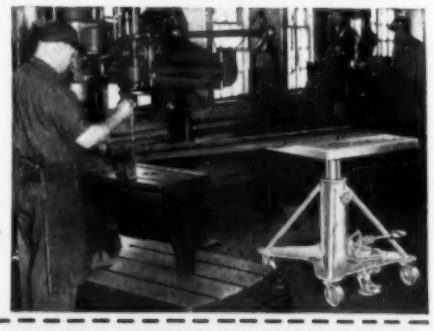
for increased production



PORTABLE
RAYMOND ELEVATING TABLE

KEEP MATERIALS at the right height for working with a **RAYMOND** Portable Elevating Table. This table increases production by permitting the operator to elevate work to the most convenient level. Use it for die handling, sheet feeding, work positioning, supporting overhanging work.

RAYMOND PORTABLE TABLE elevates and lowers hydraulically—foot pedal operated to free operator's hands. 30" square top rotates or locks when desired. Has casters for transporting work to and from machines, plus floor lock to hold table in place. Get the facts on **RAYMOND** Portable Elevating Tables—send for bulletin today.



STANDARD MODEL elevates 28" to 44". Telescopic model, 28" to 50". Both models come in 2,000 lb. capacity.

MAIL COUPON!

The RAYMOND CORPORATION

4163 Madison St., Greene, N.Y.

Please send Bulletin 233 on Portable Elevating Table.

NAME _____ TITLE _____

COMPANY _____

STREET _____

CITY _____ STATE _____

▲ For more details circle NED-789 F5 on enclosed inquiry slip ▲

New Literature and Catalogs

Tool & Die Shop Story

August W. Holmberg & Co.—The story of this company, one of America's oldest contract tool and die shops, is related in 24-page brochure entitled "Tool Up and Stamp It at Holmberg." Company has made intricate tooling for companies engaged in nearly every phase of metalworking. Photos show equipment for handling tool design, tool and diemaking, stamping and final assembly.

▲ For more details circle NED-790 F5 on enclosed inquiry slip ▲

Platinum Clad Tungsten Wire

Baker & Co.—"New!" is title of 4-page folder which describes Non-Sag platinum clad tungsten grid wire for high frequency, high power and elevated temperature applications. Wire is usually clad with 25 or 40 per cent platinum by weight, comparable to 0.0006-in. of platinum on a 0.010-in. overall diameter. It is readily cold or hot stretched and can be obtained over broad range of diameters.

▲ For more details circle NED-791 F5 on enclosed inquiry slip ▲

Liquid Level Gages

Bristol Co.—26-page bulletin L701 is descriptive of line of liquid level gages for indicating, recording, controlling and telemetering. It shows float pressure, differential pressure and bubbler type liquid and water level gages in strip and round-chart models. Air or electric controllers are available in several models.

▲ For more details circle NED-792 F5 on enclosed inquiry slip ▲

Toolholders

Vascoloy-Ramet Corp.—Style RBR-RBL toolholders for round "throw-away" carbide blanks and round 1½-in. long carbide inserts are introduced in new 12-page toolholder catalog VR-435B. Applications for this style which has 35-degree end clearance angle is on cam actuated machines where the plunging angle is 32 degrees or less. Six other styles for straight and lead angle turning, straight and lead angle facing and plunge turning are also shown.

▲ For more details circle NED-793 F5 on enclosed inquiry slip ▲

Nuclear Reactor Controls

Leeds & Northrup Co.—"Control Systems for Nuclear Reactors" is title of 8-page folder ND46-70-700(1) which outlines the design, instrumentation and fabrication of complete packaged control systems for operation of any type of research or power reactor. It explains the control channels which comprise a reactor control system, and discusses various services offered by company as part of their "package" concept of control system engineering.

▲ For more details circle NED-794 F5 on enclosed inquiry slip ▲

SPRAY NOZZLE REFERENCE MANUAL

write for your free copy today

- to help you improve a spraying operation
- to help you lower a spraying cost

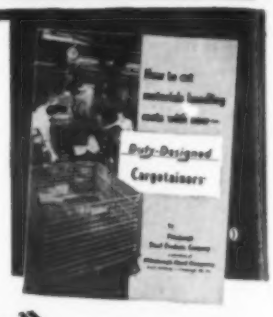
The most complete industrial spray nozzle catalog ever produced. Gives you reference data on thousands of standard and special spray nozzles for every type of spraying.

WRITE FOR your free copy of Catalog No. 24

SPRAYING SYSTEMS CO.
3211 Randolph St. Bellwood, Illinois

▲ For more details circle NED-795 F5 on enclosed inquiry slip ▲

How to reduce materials-handling costs!



Did you know you can get Cargotainers® "Duty-Designed" for your particular products? Cargotainers are now working for some of America's largest manufacturers handling everything from auto parts, thread, smoked ham, plastic, electrical equipment—yes, even to the U. S. mail. Cargotainers pay for themselves quickly because they reduce damage to merchandise and equipment, double storage space, speed production, save labor.

A new 24-page illustrated manual has just been published. Regardless of the type or kind of products you make, you should have a copy. It's yours for the asking. **Pittsburgh Steel Products Company, 1407 Grant Building, Pittsburgh 30, Pennsylvania.**

▲ For more details circle NED-796 F5 on enclosed inquiry slip ▲

SPEED CONTROL WIDE RANGE! LOW COST!

new catalog free

Just off the press! New illustrated catalog describes SPEED SELECTOR'S new line of Variable Pitch Sheaves. These sheaves are for extra-wide range of speed control on fixed centers...also completely new designs for low speed applications. Save time, trouble, money...WRITE FOR CATALOG No. 44 TODAY.

SPEED SELECTOR INC.

118-N NOBLE COURT • CLEVELAND 13, OHIO

▲ For more details circle NED-797 F5 on enclosed inquiry slip ▲

MILL-ROSE TWISTED-IN-WIRE BRUSHES

You can order any type of special twisted-in-wire brush from us by merely sending specifications with the part to be cleaned. However, our standard line of 56 brushes may meet your needs. Send for catalog EQ 55.

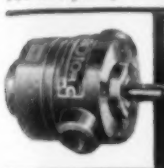
HIGH PRECISION MILL-ROSE INDUSTRIAL BRUSHES

THE MILL-ROSE CO., 1985 East 59th Street, Cleveland 3, Ohio

▲ For more details circle NED-798 F5 on enclosed inquiry slip ▲

There's a GEROTOR Hydraulic PUMP to meet your requirements!

The GEROTOR line of precision engineered hydraulic pumps is designed to fill the requirements of the majority of hydraulic equipment users. The three standard GEROTOR models cover a range of g.p.m. delivery from .4 g.p.m. to 40 g.p.m. Check the capacity tables for the pump to fill your needs.

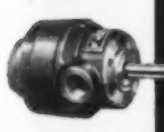


TYPE QDB

New series of small capacity pumps . . . last word in precision engineering

DELIVERY G.P.M. — 1800 R.P.M.

Type	Discharge Pressure P.S.I.				
	0	250	500	750	1000
QDB .4	.42	.40	.38	.35	.31
QDB .75	.84	.80	.78	.73	.66
QDB 1.5	1.67	1.62	1.57	1.50	1.42



TYPE QDH

Popular intermediate size of the Gerotor line

DELIVERY — G.P.M. AT 1200 R.P.M

Type	Discharge Pressure P.S.I.						
	0	250	500	750	1000	1200	1500
QDH 3	3.3	3.2	3.1	3.0	2.9	2.7	2.5
QDH 5	5.6	5.4	5.3	5.2	5.1	4.8	4.4
QDH 8	8.6	8.5	8.4	8.3	8.2	8.1	7.8
QDH 12	12.9	12.8	12.7	12.5	12.3	12.2	11.8

TYPE 0

When larger capacities are needed

DELIVERY — G.P.M. AT 1200 R.P.M.

Type	Discharge Pressure P.S.I.				
	0	250	500	750	1000
O-20	20.0	19.5	18.8	18.0	17.2
O-25	25.0	24.5	24.0	23.2	22.2
O-30	31.2	31.0	30.5	29.8	29.0
O-40	43.0	42.5	42.0	41.5	40.0

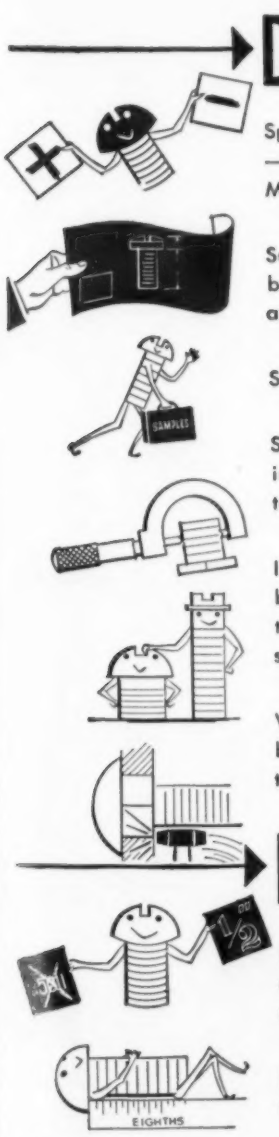
Whatever your needs in hydraulic pumps . . . consult the GEROTOR engineers. Write for FREE literature and information, no obligation, of course. **GEROTOR MAY CORP., 1515 Maryland Ave. Balto, 3. Md.**

GEROTOR HYDRAULIC PUMPS & MOTORS
Pneumatic Bin Evacuators
Precision Contract Mfg.

For more details circle **NED-800 F5** on enclosed inquiry slip

Tips on Cutting Costs in Ordering Fasteners

You can avoid unnecessary delays and costly misunderstandings by checking the following points when inquiring about or ordering fasteners.



DO

Specify all allowable tolerances—indicate whether all PLUS, all MINUS, or PLUS and MINUS.

Submit sketch if possible (may be rough as long as dimensions are clearly shown).

Submit samples if possible.

Specify as liberal tolerances as intended use will permit. (Close tolerances increase costs.)

If any special allowance is to be made for subsequent plating the thickness of plate should be specified.

Where square shoulders are to be subsequently staked over, this fact should be so stated.

DON'T

Don't specify dimensions in decimals when fractional dimensions are sufficient.

Don't specify lengths in units finer than necessary.

REPRINTS *of this chart are available on request for use in drafting and purchasing departments.*

MACHINE SCREWS AND SPECIAL FASTENERS ARE OUR BUSINESS

WRITE FOR OUR CATALOG

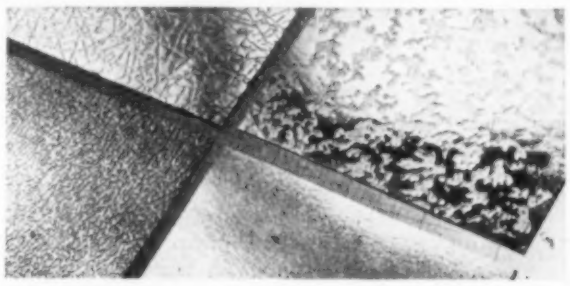
THE PROGRESSIVE MANUFACTURING COMPANY
46 NORWOOD ST., TORRINGTON, CONN.

For more details circle **NED-801 F5** on enclosed inquiry slip

New Processes and Materials

PATTERNED STRIP STEEL
thicknesses from 0.010 to 0.125-in.

Cold rolled strip steel is now available with almost any pattern design that can be drawn on a piece of paper. Strip can be supplied in plain uncoated steel

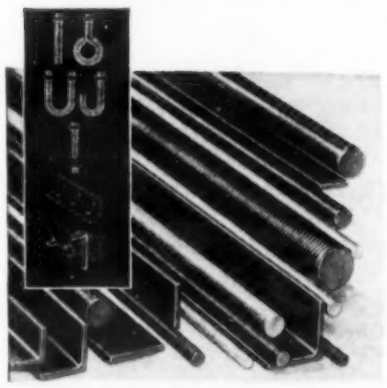


or electrolytically coated with copper, brass, nickel, chrome, zinc or lead alloy in natural planished or buffed finishes. It can be hot dip coated with lead alloy or tin and lacquer coated either clear or colored. Pattern designed strip is produced in widths up to 18 in. and in range of thicknesses from 0.010 to 0.125-in., depending upon pattern and type of coating. Made by **Pittsburgh Steel Co.,** Thomas Strip Div., Dept. NED, Warren, O.

For more details circle **NED-802 F5** on enclosed inquiry slip

RODS & BARS
threaded and unthreaded types

Available in both aluminum and steel, Hande-Bolts can be made into straight, eye, U, toggle or stay bolts. The continuously National Coarse threaded rods are usable for new building or repair work, fixture installation, adjustable motor supports and ladder reinforcement. Rods of Reynolds aluminum, offered in ¼, 5/16, ⅜ and ½-in. diameters in 2 and 3-ft lengths, can be worked with woodworking tools. Steel Hande-Bolts are available in 15 diameters from 6-32 to 1½ in. in 2 and 3-ft lengths. Hande-Bars, flats and angles of ⅛-in. stock, can be ordered in 4-ft lengths. Special lengths of threaded and unthreaded steel and aluminum rods, and steel flats and angles up to 12 ft long are also available. Made by **Perfection Model Products,** Dept. NED, 4145 W. Kinzie St., Chicago 24, Ill.



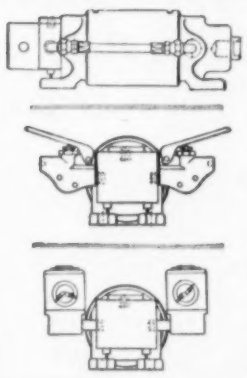
For more details circle **NED-803 F5** on enclosed inquiry slip

for designers . . .

NOW A COMPLETE AIR POWER PACKAGE

THE NEW POWER-PACK AIR CYLINDER with BUILT-IN VALVE

CARTER



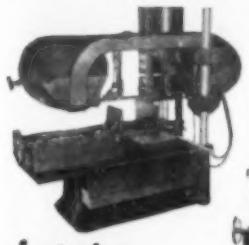
The ultra-modern power package that gives you your choice of solenoid, poppet, or remote control. Designs into automatic setups easily. Offered in all standard bore sizes and mounting styles . . . stroke lengths to 3 feet. Precision type built-in valve assures accurate control of power. Carter Controls, Inc., 2876 Bernice Road, Lansing, Ill. Phone Lansing 1305.

Delivery One Week on Most Models

SEND FOR COMPLETE INFORMATION ON DETAILS AND SPECIFICATIONS

For more details circle **NED-804 F5** on enclosed inquiry slip

METAL "CUT-OFF" becomes a preferred job...



with rugged dependable "WELLSAWS"

featuring . . .

- Easily Controlled Operation
- Fast, Accurate Action
- High Job Productivity
- Low Operating Cost
- Long, Dependable Service

• Production, or utility "cut-off" work in your shop becomes a *Preferred Job* with a Wells Horizontal Metal Cutting Band Saw, because the *operation* is so *easy to control.* Even in the hands of the "new guy," a Wells Band Saw can be counted on to *Reduce* your *Production Costs,* through greater efficiency, more accurate cutting and real dependable service.

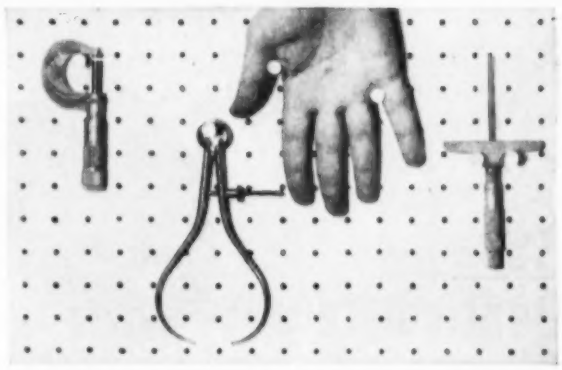
Call your Wells Distributor, or write for *Job-Engineering Service.*

Wells

The Pioneers of Horizontal
METAL CUTTING BAND SAWS
WELLS MANUFACTURING CORP.
1313 HARDING ST. • THREE RIVERS, MICH.

For more details circle **NED-805 F5** on enclosed inquiry slip

WHICH TOOLS COST YOU THE MOST?



Of All The Tools Illustrated Above, The Most Costly—by far—Are Your Worker's Hands! Your plant probably is spending thousands every year keeping tools and machinery in good shape. O.K.—that makes sense! But, what about the most expensive production tools you use — your worker's hands? Are you risking them on cheap, inefficient profit-stealing, irritating "bargain" soaps?

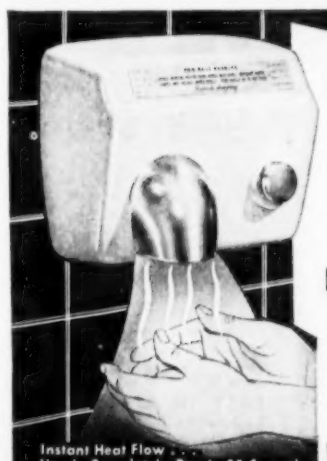
Send for descriptive literature offering a valuable SBS program for achieving skin health in your plant—for the very same amount of money you are now spending on ordinary hand soaps! Write to us today.

THE WASHWORD SBS *OF INDUSTRY*

Sugar Beet Products Co.
Chemical By-Products Division
902 Waller St., Saginaw 33, Mich.

Canadian Subsidiary
Chemical By-Products, Ltd.
8 Ripley Ave., Toronto 3, Canada

For more details circle **NED-806 F5** on enclosed inquiry slip



Instant Heat Flow . . . Hands Completely Dry in 20 Seconds.

Proven More Sanitary Than Any Other Method of Hand Drying by Impartial Tests of U. S. Public Health Service

AND HERE'S WHAT HAPPENS WHEN YOU INSTALL NATIONAL HAND DRYERS:

- Recurring towel and laundry expense ended forever.
- Maintenance costs reduced to a minimum.
- No more plumbing expenditures for towel-clogged toilets.
- Absence of unsanitary towel litter.
- No used towel ends to pass along germs.
- Automatic 24-hour service . . . ends complaints about empty towel containers.
- Fastest drying action . . . relieves congestion in washrooms.
- No chapping of hands or face.
- Small compact design leaves washroom free from clutter.

END RECURRING TOWEL EXPENSE *Forever* by installing NATIONAL HAND DRYERS! *Never Again* COSTLY WASHROOM MAINTENANCE . . . TOWEL LITTER

PAID FOR THEMSELVES IN 6 MONTHS AT TOUREK MFG. CO. as reported in Factory Management and Maintenance

LEARN HOW YOU CAN SAVE 85¢ OUT OF EVERY MAINTENANCE DOLLAR. No obligation, of course.

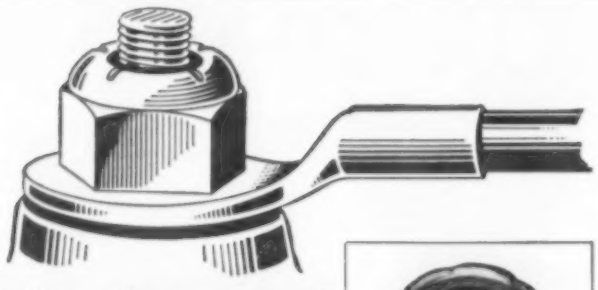
Mail This Coupon Today

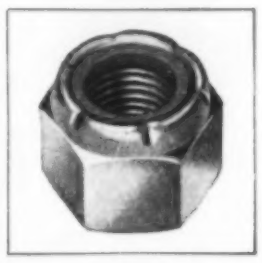
NATIONAL DRYER SALES CORP. Dept. 26
616 W. Adams St., Chicago 6, Illinois

Send me the facts. Cost comparison of towels vs. National Hand Dryers, Public Health Service Reports and descriptive literature.

Name_____ Title_____
Company_____
Address_____
City_____ Zone____ State_____

For more details circle **NED-807 F5** on enclosed inquiry slip





Vibration-proof electric terminals

Self-locking brass Elastic Stop® nuts provide positive protection against the loosening effects of vibration. The red elastic locking collar provides a constant grip on terminal studs . . . prevents ignition or power supply failures. Because Elastic Stop nuts remain tight in any position on the stud—whether firmly seated or not—they are easily adjusted. One-piece fasteners, readily removed and re-used.

Write ESNA® for the most practical answer to your fastener problem. Address Dept. N57-637.

ESNA

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, N. J.

DESIGN HEADQUARTERS FOR SELF-LOCKING FASTENERS

▲ For more details circle **NED-808 F5** on enclosed inquiry slip ▲

Precision Potentiometers

at Popular Prices

The New G-R 970 Series Wire-Wound Potentiometers Feature

☆ *Accurate Resistance Values* ☆ *High Resolution*
☆ *Good Linearity* ☆ *Low Capacitance to Ground*
☆ *Uniform Contact Pressure* ☆ *Low Electrical Noise*
☆ *No Pressure Connections* ☆ *Total Enclosure*
☆ *Stable & Repeatable Settings* ☆ *Long Life*
☆ *Seventeen Stock Values: 2 to 500,000 Ohms*
☆ *Eight Sizes: 2 to 20 Watts* ☆ *Low Cost: $3.15 to $10.00*

Before purchasing *any* precision potentiometer, investigate these new G-R Units. Write for the POTENTIOMETER BULLETIN

GENERAL RADIO Company

275 Massachusetts Avenue, Cambridge 39, Massachusetts, U.S.A.

90 West St. **NEW YORK 6** *8055 13th St., Silver Spring, Md.* **WASHINGTON, D.C.**
York Road & Guernsey Avenue, Abington, Pa. **PHILADELPHIA**
920 South Michigan Ave. **CHICAGO 5** *1000 North Seward St.* **LOS ANGELES 38**

▲ For more details circle **NED-809 F5** on enclosed inquiry slip ▲

"SHADE"

Remarkable Vinylite Sheeting that ABSORBS Heat and Glare

SHADE will not become brittle or crack even in temperatures from −25 to 150 F. All you need is a squeegee, a bucket of water, and some pieces of factory pre-cut SHADE to eliminate glare and heat. Easy to apply, permanent and washable, SHADE is custom cut to fit your windows—Order yours today!

The unfiltered rays of the sun, even on a cloudy day, can be a major cause of fatigue. SHADE is a specially formulated compound to filter light!

NO MORE PAINTING
No need for repeated painting of glass surfaces: with SHADE you have an easily applied filter, *bonded* to the glass. It won't crack or grow brittle.

EASY TO APPLY
Application requires no special skill or tools. It is pre-cut at the factory. Wet, place polished side to glass, squeegee out excess water.

PERMANENT
Following out this procedure will effect a permanent bond. SHADE will *never* come off until you pry up a corner and strip it off yourself.

WASHABLE
Can be washed like regular glass. If you wish to remove it, a quick washing in warm water will restore its adhesiveness.

COLOR CHOICES
Colors are available in FROSTED TRANSLUCENT, ARCHITECTURAL BLUE, TRANSPARENT BLUE, FILTERED WHITE, OLIVE GREEN, TRANSLUCENT GREEN and BLACK-OUT BLACK.

TRANSEAL, Ltd.

Dept. NED, 100 Oak Tree Ave., South Plainfield, N. J.
Telephone PLainfield 6-3800

▲ For more details circle **NED-810 F5** on enclosed inquiry slip ▲

New Literature & Catalogs

Manlift Elevator

Humphrey Elevator Co.—Pocket-size folder No. HF-55 contains complete information on the Humphrey line of Manlift Elevators. These units are power-driven continuous-belt elevators with hand holds and steps at proper intervals to provide simultaneous up and down employee transportation without waiting or delay. Manlifts are usable in all multistory buildings where there is vertical processing or products, or where frequent or quick inspection or servicing of machinery on various floor levels is required.

▲ For more details circle **NED-811 F5** on enclosed inquiry slip ▲

Chemical Feed Systems

Philadelphia Pump & Machinery Co.—Packaged chemical feed systems for general water treating requirements and for individual chemical processing needs are presented in illustrated bulletin LP-1254. Units will proportion one or two chemicals into a plant system. Complete units comprise single or divided tanks of 25 to 200-gal capacity equipped with simplex or duplex Phila-Feeder for delivering from a few cubic centimeters to 18.6 gph.

▲ For more details circle **NED-812 F5** on enclosed inquiry slip ▲

Electric Controls

General Electric Co., General Purpose Control Dept.—68-page illustrated catalog of general purpose electric control devices is designated GEC-1260A. Specifications, prices, wiring diagrams and dimensions are given on motor starters, contactors, relays, solenoids, switches, pushbuttons and pilot devices. Applications and merits of manual and magnetic control, across-the-line and reduced-voltage control are compared.

▲ For more details circle **NED-813 F5** on enclosed inquiry slip ▲

Automatic Nut Formers

Waterbury Farrel Foundry & Machine Co.—Multiple die, single stroke automatic nut formers described in illustrated 8-page bulletin 930-A-2 produce a cold forged, nut blank with every stroke. Rates range from 60 to 125 blanks per minute. How single and double chamfered, washer face and castellated nut blanks as well as special locknuts, pipe plugs and similar parts are produced from cold drawn wire or rod is explained. Specifications for five machine sizes are given.

▲ For more details circle **NED-814 F5** on enclosed inquiry slip ▲

Copper-Aluminum Alloy

Alcaloy Inc.—Basic properties and applications of Alcaloy alloy of copper and aluminum are subject of 32-page illustrated catalog. This material is nonsparking, nonmagnetic and highly resistant to corrosion. Typical products made of this alloy include chain and accessories, safety tools and parts for industrial equipment. It is available in permanent mold castings.

▲ For more details circle **NED-815 F5** on enclosed inquiry slip ▲

Indicating Controller

Foxboro Co.—12-page illustrated bulletin 5A-13 presents details on operation and applications of the new model 41A pneumatic indicating controller. This unit is designed for the control of such process variables as temperature, pressure, liquid level and humidity. Diagrams and data on various measuring systems are included.

▲ For more details circle **NED-816 F5** on enclosed inquiry slip ▲

Portable Type Compressors

Westinghouse Air Brake Co., Le Roi Div.—All of the 40 models of portable type compressors available from company are pictured in 12-page catalog CG-9A. Reference chart shows capacities, engine types and mounting available. Airmaster units are made with gasoline and diesel engines ranging in sizes from 85 to 600 hp.

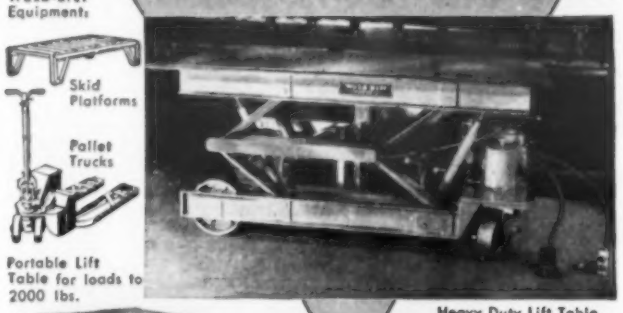
▲ For more details circle **NED-817 F5** on enclosed inquiry slip ▲

Chain Link Fences

Continental Steel Corp.—44-page manual "Planned Protection" features 25 different ways in which chain link fences are serving industrial, institutional and municipal fields. Specifications on light and heavy chain link fencing are given, styles are illustrated, and various types of terminal and line posts are shown. Gate construction details are outlined.

▲ For more details circle **NED-818 F5** on enclosed inquiry slip ▲

take the back-breaking LIFT out of the Heavy Jobs with . . .



Heavy Duty Lift Table, Electric or Manual Control.

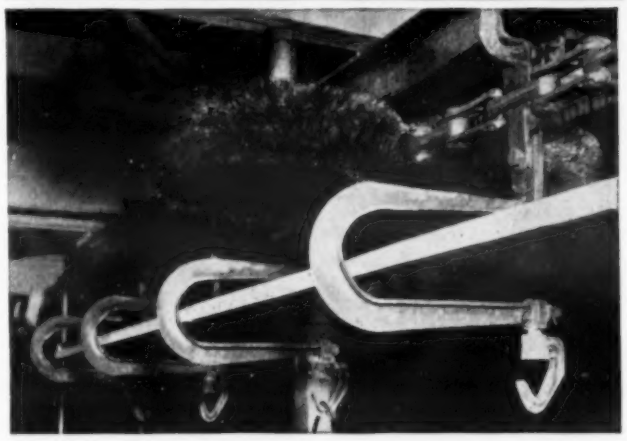
Weld-Bilt
HYDRAULIC LIFT TABLES

Now heavy dies, sheet steel, big machined parts are *easy* to handle — with WELD-BILT Hydraulic Lift Tables. Simple to adjust to loading height, move to press or machine position, and raise or lower to comfortable working position — without heavy lifting.

Heavy Duty Lift Tables, for loads up to 10 tons, have foot pedal and push button control, or foot pump. Portable Lift Table handles loads to 2000 lbs. Write for bulletin and prices.

WEST BEND EQUIPMENT CORP.
Materials Handling Engineers
311 Water Street • West Bend, Wisconsin

▲ For more details circle **NED-819 F5** on enclosed inquiry slip ▲



End of the line for costly downtime

THE conveyor chain above used to be dismantled and cleaned periodically to remove dirt and scale. Now, Osborn Disc-Center® Brushes, mounted on each side of the chain, revolve with the chain and remove all scale and dirt continuously.

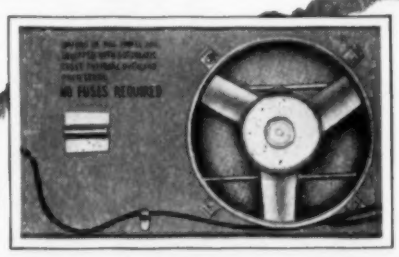
This is just one of thousands of ways in which plants step up production with Osborn brushes. For lower costs, specify Osborn for all power, maintenance and paint brushes. *The Osborn Manufacturing Company, Dept. Z-25, 5401 Hamilton Avenue, Cleveland 14, Ohio.*

Osborn Brushes

OSBORN BRUSHING METHODS • POWER, PAINT AND MAINTENANCE BRUSHES
BRUSHING MACHINES • FOUNDRY MOLDING MACHINES

▲ For more details circle **NED-820 F5** on enclosed inquiry slip ▲

"Since the Change-Over to KLIXON Protectors, Service Problems have been drastically reduced and inconvenience of Stocking and Servicing of Fuses has been completely eliminated."
PRECO, Incorporated



A section of the Preco Fan panel illustrating one of the fans.

Two years ago, Preco Incorporated, Los Angeles, standardized on KLIXON Inherent Overheat Protectors in their three-phase refrigerator rail car fan motors. These are used in the difficult job of circulating air from an axle driven power source while the cars are in motion over the road bed. Previously fuses were used for motor protection.

Since the change-over, the stocking of fuses is no longer required and the former inconvenience and expense to the car lines of servicing burned out fuses has been completely eliminated.

Preco fans are installed in the upper part of the refrigerator car bulkhead. Each three-phase fan motor contains two built-in automatic reset KLIXON Protectors which are so connected that they fully protect all three windings against damage from overheating under all operating conditions.

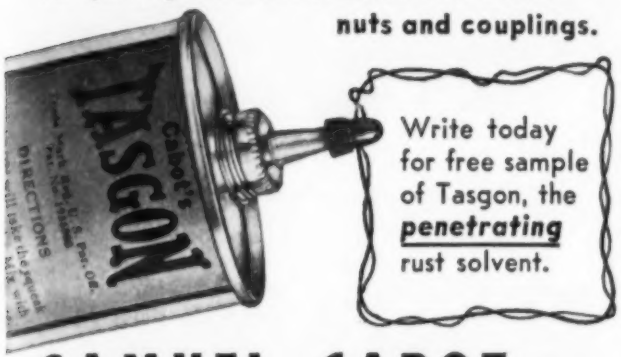
Even when these motors are jammed by ice or salt that spills over from the bunkers, full protection is afforded . . . when the ice jam melts, fans restart and restore air circulation automatically.

You, too, can keep motors in your equipment operating. Reduce service calls and repairs by specifying and using KLIXON protected motors. The additional cost is low, pays for itself over and over by reducing motor burnouts.

METALS & CONTROLS CORPORATION
SPENCER THERMOSTAT DIVISION
1906 Forest Street, Attleboro, Mass.

▲ For more details circle **NED-821 F5** on enclosed inquiry slip ▲

To quickly dissolve rust, loosen bolts, nuts and couplings.



Write today for free sample of Tasgon, the **penetrating** rust solvent.

SAMUEL CABOT INC.
632 Oliver Bldg., Boston 9, Mass.

▲ For more details circle NED-822 F5 on enclosed inquiry slip ▲

Ren•ite® Plastic tooling compounds cut costs on this job by four fifths! Delivery time was cut 70 per cent! Drop hammer dies for this press are made of compounds based on BAKELITE Epoxy Resins and produced by **Ren-ite Plastics,** Lansing 4, Mich. The dies stamp these trays out of 75 SO aluminum sheet.

Fast, low-cost tooling with compounds based on BAKELITE Epoxy Resins

Frequent model changes and tough competition demand quick tooling at less cost. Look into these advantages of BAKELITE Brand Epoxy Resins for metalworking tools:

- Liquid compounds—can be cast to shape without pressure
- Cured at room temperature—no applied heat
- Minimum shrinkage—minimum finishing
- Excellent flexural, compression, and impact strengths
- Outstanding dimensional stability
- Light weight means easy handling
- Laminated with glass cloth to form jigs, spotting racks, fixtures, and Keller models.

BAKELITE BRAND EPOXY RESINS

BAKELITE COMPANY
A Division of Union Carbide and Carbon Corporation
UCC
30 East 42nd Street, New York 17, N. Y.
In Canada: Bakelite Company, Division of Union Carbide Canada Limited Belleville, Ontario
The term BAKELITE and the Trefoil Symbol are registered trade-marks of UCC

▲ For more details circle NED-823 F5 on enclosed inquiry slip ▲

New Processes & Materials

MOVABLE ACOUSTICAL WALLS
sections made in 7 or 8-ft heights

Building interiors can be effectively divided with Soundex Walls, prefabricated movable wall sections made in modular 4 and 5-ft widths, 2½ in. thick and 7 or 8 ft in height. Surfaces are of perforated Presdwood and enclose an acoustical core composed of mineral board surrounded by nonflammable spun glass. Sections are offered glazed or unglazed with provision made for ceiling-high fillers. Each wall section locks to the next by wooden spline and three bolts, and each can be anchored to floor. Also, each has self-contained individual raceways for power and communication wiring. Doorway sections can be selected without doors, or with choice of prehung doors. Made by **G R Products, Inc.,** Dept. D, 142 Federal Square Bldg., Grand Rapids 2, Mich.

▲ For more details circle NED-824 F5 on enclosed inquiry slip ▲

PROTECTIVE COATING
preserves chemically cleaned metals

Chemically clean metal surfaces obtained directly after electroplating or chemical cleaning can be preserved with Laqua protective coating. Product can be sprayed or dip-applied to part right after water rinse without drying since it displaces the water as it deposits. A film 0.0001-in. thick has electrical resistance of 0.2-ohm at 1½ v and will not interfere with electrical connections, wiring or parts attached to a chassis that must remain in electrical contact. Product, likewise, will not affect soldering operations or spot welding of cadmium-plated and aluminum parts. Salt-spray resistance is very good. Developed by **Fidelity Chemical Products Corp.,** Dept. WD, 470-474 Frelinghuysen Ave., Newark 5, N. J.

▲ For more details circle NED-825 F5 on enclosed inquiry slip ▲

***REMA** is the New and Amazing Self-Vulcanizing Rubber Repair Material*

REMA REQUIRES
- NO HEAT
- NO HEAVY EQUIPMENT
- NO CURING TIME DELAY

▼ REMA is not just another cold patch. REMA is vulcanization by chemical process. No heat or heavy vulcanizing equipment required. Here's the astonishing advantage — *when repair work is completed belts may be returned to service immediately.*

▼ REMA seals out moisture, reduces mildew, rot and deterioration — the great enemies of conveyor belts. Your own maintenance man can quickly repair your belts.

▼ Available in introductory kits or parts separately.

Order from your Flexco-Alligator distributor. **Write for Folder No. R4**

FLEXIBLE STEEL LACING CO., 4664 Lexington Street, Chicago 44, Illinois

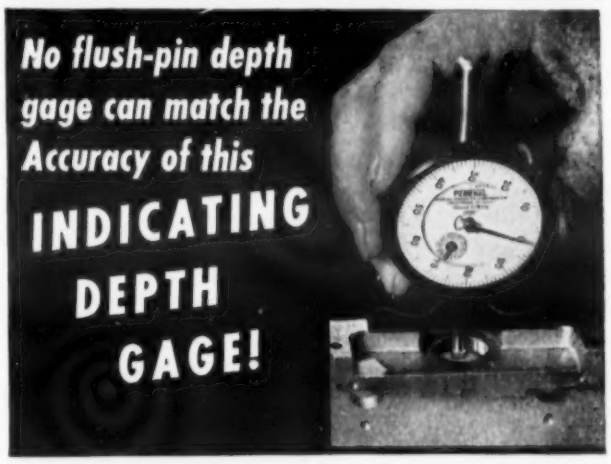
REMA SELF-VULCANIZING RUBBER REPAIR MATERIALS

▲ For more details circle NED-826 F5 on enclosed inquiry slip ▲

Here's the valve with the cushioned, leak tight closure that actually *accommodates* itself to surface irregularities, scale or foreign material. Suitable for pressures to 150 psi, temperatures to 170° F. Lever, handwheel or power operated, all working parts isolated from flow. Design eliminates packing. Write for bulletin. HILLS-McCANNA CO. 2455 W. Nelson, Chicago 18, Ill.

HILLS-McCANNA
saunders patent diaphragm valves
Also manufacturers of
Chemical Proportioning Pumps • Force-Feed Lubricators
Magnesium Alloy Sand Castings

▲ For more details circle NED-827 F5 on enclosed inquiry slip ▲



FEDERAL INDICATING DEPTH GAGES provide the positive, accurate, and convenient means of inspecting depths of holes, slots, and other recesses. Available for general or production inspection, with various contact points and special bases to suit the particular needs of the user. Send for our catalog showing the most complete line of Dial Indicators and Indicating Gages. FEDERAL PRODUCTS CORP., 5176 Eddy St., Providence 1, Rhode Island.

FEDERAL
Largest manufacturer of indicating type gages . . . exclusively

▲ For more details circle NED-828 F5 on enclosed inquiry slip ▲

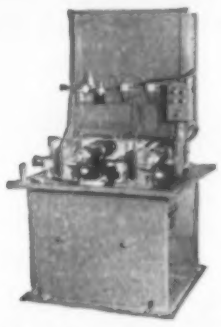
WRITE FOR LITERATURE

With an ADJUST-A-LEG Equalizing Sling, unbalanced and "hard to get hold of" loads may be handled as easily as simple loads. As the tension of the lift comes on, the legs automatically adjust themselves to proper lengths and *frictionally lock in position.* The load is raised level . . . with *no* fuss, *no* bother, *no* figuring — the Sling does it! Sizes ¼-ton to 50-ton.

THE CALDWELL COMPANY, INC., 3413 AUBURN ST., ROCKFORD, ILL.

▲ For more details circle NED-829 F5 on enclosed inquiry slip ▲

Automation Speeds Up Hole Drilling



New Machine Drills 40 Pieces Per Minute

Drilling at a higher production rate and a lower production cost is the result achieved by applying the principles of automation in the designing of this new Govro-Nelson Automatic Drilling Machine for drilling a .135 hole in a brass part.

The machine incorporates two independent Govro-Nelson Automatic Drilling Units, each being completely interlocked with an air-operated magazine which is kept filled by the operator or mechanically. The parts are automatically clamped, drilled and ejected into a chute, permitting complete automation. Output rate: 40 pieces per minute. Literature on request.

GOVRO-NELSON CO.
1933 Antoinette
DETROIT 8, MICH.

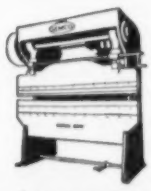
Automatic DRILLING UNIT

For more details circle NED-830 F5 on enclosed inquiry slip

Wide Range Work On
SEMCO WIDE RANGE PRESS BRAKES

All are low priced with features you would expect in much costlier presses.
- All Steel Welded Construction
- Heavy Alloy Forged Steel Pitmans with Buttress Threads
- Anti-friction and Bronze Bearings Throughout
- Eccentric Shafts are Heat Treated Alloy Steel Forgings
- Double geared and Twin driven for balanced distribution of power

Extras at no extra cost
- **3" Stroke, 12" Shut Height**

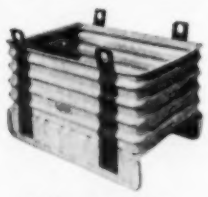


Send for NEW catalog illustrating newest models of Press Brakes and including Standard 90 Carbon Forged Steel Press Brake Dies.

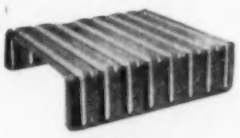
SEMCO
SERVICE MACHINE CO., INC.
ESTABLISHED 1919
202 Miller St. Elizabeth 4, N. J.

For more details circle NED-831 F5 on enclosed inquiry slip

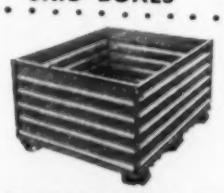
COST CUTTING EQUIPMENT



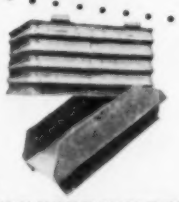
SKID BOXES



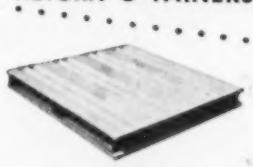
SKIDS



RETURN-O-TAINERS



DROP BOTTOM HOPPERS



PALLETS

Send for catalog on Pressed Steel Equipment

FAB-WELD CORPORATION
SALMON & PICKWICK STS., PHILADELPHIA 34, PA.

For more details circle NED-832 F5 on enclosed inquiry slip

New Literature & Catalogs

Low Temperature Welding Guide

Eutectic Welding Alloys Corp.—32-page illustrated DirectoRod Guide TIS 1340A describes over 300 low-heat input metal joining applications and procedures. How to use the available types of Eutectic Directo-Rods for welding and overlaying of all base metals is explained.

For more details circle NED-833 F5 on enclosed inquiry slip

Looseleaf Products

Elbe File & Binder Co.—96-page illustrated catalog No. 62 gives data on over 2000 stock items of looseleaf products. Included is a complete presentation on binders and folders of all types, record holding devices and sales presentation equipment.

For more details circle NED-834 F5 on enclosed inquiry slip

Industrial Plant Sites

Upper Kanawha Valley Development Assn.—The industrial advantages and facilities which are available to new or expanding industries are clearly depicted and described in 16-page illustrated booklet entitled "The Magic Valley of Industrial Promise." Presented are complete statistics as to employment, transportation, all resources and a color map of the area.

For more details circle NED-835 F5 on enclosed inquiry slip

Motor Buying Guide

General Electric Co.—Guidance for the selection, application and purchase of alternating current motors is provided by 28-page illustrated catalog GEC-1026. Both fractional and integral horsepower motors for general and definite purpose uses are covered.

For more details circle NED-836 F5 on enclosed inquiry slip

Bronze Valves

Milwaukee Valve Co.—Fifty-five different types of bronze valves in complete range of sizes are detailed in 8-page illustrated Milvaco Catalog. Descriptions, sizes and weights of gate, angle, globe, check, foot, needle and other valves as well as of manifold header units, strainers and relief valves are presented.

For more details circle NED-837 F5 on enclosed inquiry slip

Compressed Air Cleaner-Drier

R. P. Adams Co.—12-page illustrated catalog 711 deals with aftercoolers and separators which assure cool, clean, dry supply of compressed air. Engineering data aids in calculating plant needs and guides in selection of proper type and size of unit.

For more details circle NED-838 F5 on enclosed inquiry slip

Vitreous Enameled Aluminum Castings

Monarch Aluminum Mfg. Co.—The successful application of vitreous enamel to aluminum castings is subject of illustrated brochure. Reported advantages include colorful finish and protection from abrasion. Technical data will aid designers in investigating this development for product applications.

For more details circle NED-839 F5 on enclosed inquiry slip

Scientific Equipment

Sunshine Scientific Instrument—Brief descriptions are given on a line of scientific equipment in 8-page illustrated bulletin 101. Covered are such instruments as a gel time meter, mercury vapor detector, metals comparator, magnetic comparator, electronic tachometer, constant frequency control, time interval meter and film thickness gage.

For more details circle NED-840 F5 on enclosed inquiry slip

Coil Winding Machines

Geo. Stevens Mfg. Co.—54-page illustrated catalog No. 55 describes machines for rapidly winding practically every type of coil, including armature, transformer, bobbin, solenoid, resistor, variable pitch, toroidal, deflection yoke and field coils. Accessories covered include 12 tensions, 3 counters, wire scraper, wax pot, wire take-off guide and 6 wire guides.

For more details circle NED-841 F5 on enclosed inquiry slip

Gamma Radiography

Technical Operations, Inc. — 12-page illustrated booklet presents basic information required for setting up or operating a gamma radiography installation for the nondestructive testing of various materials. It tells how to select the proper radioisotope for handling equipment, and discusses the principles of radiation safety. Tables and charts show characteristics, radiographic sensitivity and speed of isotopes.

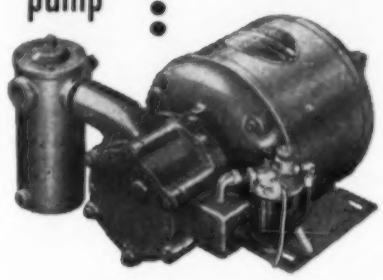
For more details circle NED-842 F5 on enclosed inquiry slip

NEED VACUUM?

use the COMPACT pump

The Motoair Pump is built integral with its own motor to take the least amount of space and to avoid extra assembly necessary with separate drive.

Automatic lubrication complete with re-circulating system and visible oil reservoir is a feature of



the MOTOAIR®

Instantaneous suction and positive action is provided with the Motoair, being directly driven at the same rpm. as the motor.

ASK FOR CATALOG with performance data on various sizes of pumps. Oil-less models also available.

824

NEW JERSEY MACHINE Corporation
FACTORY SALES AND SERVICE BRANCHES
CHICAGO CINCINNATI LOS ANGELES
1550 WILLOW AVENUE, HOBOKEN, N. J.

For more details circle NED-843 F5 on enclosed inquiry slip

SHOCK ABSORBERS FOR ELECTRICAL ASSEMBLIES

Protect your lighting fixtures and other suspended electrical equipment from vibration damage with THOMPSON shock absorbers. Featuring angular as well as vertical movement for maximum shock absorption, these durable units are designed for use in a wide range of applications.

THOMPSON shock absorbers are available in light and heavy-duty models having load capacities up to 80 pounds maximum. Fabricated from light-weight aluminum alloys, these versatile units assure long trouble-free service life for lighting fixtures, meters, fans, instrument panels, motors, process controls, unit heaters and similar items.

Write today for Bulletin SA-55 for complete details.

6099-TE

THE THOMPSON ELECTRIC CO.
1138 Power Avenue • Cleveland 14, Ohio

For more details circle NED-844 F5 on enclosed inquiry slip

get this **free** illustrated bulletin

How you Can Save Time Measuring Surface Temperatures in Your Plant with

ALNOR PYROCONS

The Alnor Pyrocon combines laboratory precision with production tool ruggedness to give you fast, accurate answers to all surface temperature problems. It takes just 3 seconds to give you the temperature of any surface...regardless of shape or material...revolving or stationary. And the heavy, shock-resisting movement is housed in a balanced unit that's compact, easy to handle.

Mail this ad with your business letterhead to Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Ill.

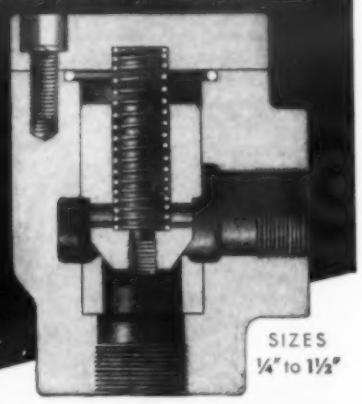
Alnor

PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-845 F5 on enclosed inquiry slip

RIVETT

Hydraulic check valves



PIPE THREAD OR FLANGE CONNECTED

SPRING CLOSED OR PILOT OPERATED

MOUNTED IN ANY POSITION

3000 P. S. I.

SIZES ¼" to 1½"

Model 8640, Spring Closed • Model 8642, Pilot Operated
Model 8644, Pilot Operated with Pressure Breaker

Allow free flow in one direction, but prevent flow in opposite direction. Large areas through valve permit unusually large volume. Ex: 1½" valve has 104.2 G.P.M. capacity at 15 ft. per sec.

Call Your Local Rivett Dealer Or Write Direct

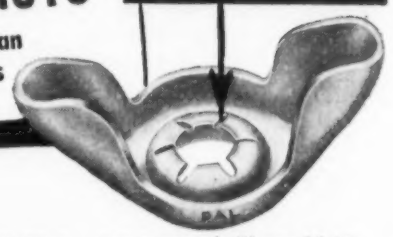
RIVETT LATHE & GRINDER, Inc., Dept. NED6, Brighton 35, Boston, Mass.
Rivett Furnishes A Complete Power Package

For more details circle **NED-846 F5** on enclosed inquiry slip

PALNUT Vibration-proof WING NUTS

cost less than ordinary types

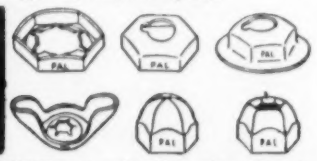
Built-in spring locking action holds tight until finger-released



An extra value for your customers—a real saving for you. Precision, spring steel PALNUT Wing Nuts spin on freely—lock securely when finger-tightened—stay tight in service—unlock with finger removal. Sizes: #6-32, #8-32, #10-32, #10-24, ¼-20 and 5/16-18. Finishes: cadmium, nickel, chrome or others to order. Send for free samples, stating sizes required.

THE PALNUT CO. 45 Cordier St., Irvington 11, N. J.
In Canada: P. L. Robertson Mfg., Co., Ltd., Milton, Ont.

PALNUT TRADEMARK LOCK NUTS



For more details circle **NED-847 F5** on enclosed inquiry slip

ONLY "CHF" TABLES

TOPS Choice of Polished *14 Ga. Stainless Steel; Formica* in all colors and designs; *Caf-o-lite* or *Edge Grain Maple!*

SEATS Choice of upholstered or hardwood seat, with back rest or seat only; cast iron seat in porcelain enamel colors; or Anodized aluminum seat.

BASES Lifetime Cast Construction in your choice of colorful enamel paint finishes. Units available in lengths to seat 4 to 24 people.

Write Today for Free Catalog!

DISTRIBUTORS IN ALL PRINCIPAL CITIES

The Chicago Hardware Foundry Company
"Dependable Since 1897"
1965 Commonwealth Ave.
NORTH CHICAGO, ILL.

For more details circle **NED-848 F5** on enclosed inquiry slip

New Processes & Materials

LOW VIBRATION V-BELT has built-in spring action

Smooth, quiet operation of appliances, air conditioning units, forced-air furnaces and shop equipment is assured with use of Vibrasorb V - belts. Up to 24 per cent more vibration is absorbed by belts than previously rated low vibration types. Improved performance is result of use of materials which give belt a built-in spring action. By isolating and absorbing vibration, belts minimize transmission of vibration from one pulley to another. Flex life is also up to 90 per cent greater. In photo, belt is being tested for vibration. Made by **B. F. Goodrich Co.,** Industrial Products Div., Dept. E, 500 S. Main St., Akron 18, O.

For more details circle **NED-849 F5** on enclosed inquiry slip

ALUMINUM ALLOYS for welded and fabricated uses

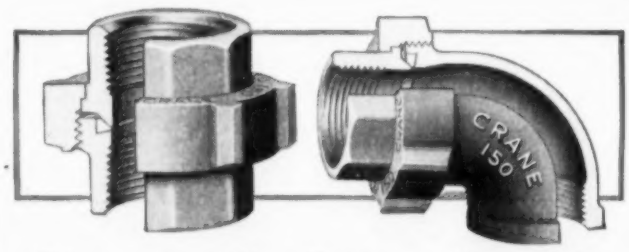
Developed to compete with mild steel in fabrication and welding costs, 5083 aluminum alloy can be welded at high speeds with inert-gas arc welds having an ultimate tensile strength of 42,500 psi. Joint efficiencies vary from 75 to 100 per cent, depending upon the temper of the parent metal. Alloy is available in 0 and H-113 temper plate ranging in gage from 0.25 to 2 in. and standard lengths in widths from 12 to 90 in. Made by **Kaiser Aluminum & Chemical Corp.,** 1924-N Broadway, Oakland 12, Calif.

For more details circle **NED-850 F5** on enclosed inquiry slip

MAINTENANCE COATING KIT four products in spray type cans

Individual cans for lubricating oil, penetrating oil, rust inhibitor and all-weather clear-coat are included in the Crown Spray Line utility kit. The 6-oz aerosol (spray type) cans enable the user to spray their contents in and around inaccessible places. There is no loss due to evaporation. Made by **Crown Industrial Products Co.,** 1004 Amsterdam St., Woodstock, Ill.

For more details circle **NED-851 F5** on enclosed inquiry slip



Give your Pipefitters a "break" with CRANE Unions and Union Fittings

The man with the wrench is glad to find Crane unions and union fittings going into the job. Crane tappings are always right in dead center. Threading is clean-cut for quick starts. As a result, piping makes up or takes down faster, easier. That means true alignment and tight seals, with minimum effort.

These high-quality malleable iron unions and fittings have extra strength and greater durability. They're interchangeable—may be used for steam, water, oil, gasoline and other fluids.

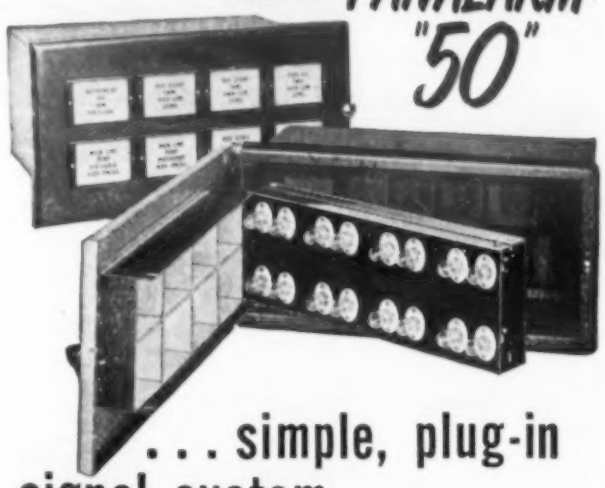
Crane offers a wide variety of types and sizes, gasket type, "Railroad," etc., with brass-to-iron, all-iron or brass-to-brass seats. Send for Folder AD 1996—or ask your Crane Representative.

CRANE CO.
General Offices: 836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • KITCHENS • PLUMBING • HEATING

For more details circle **NED-852 F5** on enclosed inquiry slip

NEW PANALARM "50"



. . . simple, plug-in signal system . . .

ALL your signal requirements are fulfilled by a single PANALARM "50". This combined audio-visual system is self-contained, prewired, easily installed. New features permit circuit changes without re-wiring. New instrument-type construction gives maximum dependability and service.

All moving parts and contacts are within hermetically sealed, corrosion-proof, plug-in units. Additional signals are merely plugged in.

PANALARM "50" . . . available with backlighted nameplates or bullseye lamps . . . for 3 to 54 signals.

Write for Informative Catalog 100.

PANALARM **PANALARM PRODUCTS, INC.**
7421 N. Hamlin Ave. • Skokie, Illinois

For more details circle **NED-853 F5** on enclosed inquiry slip

RAISE AND LOWER HEAVY LOADS... QUICK AND EASY

WITH GLOBE Electro-LOADERS

Ramps, stairs, make-shift inclines are eliminated; trucks, trailers, rail cars are conveniently and safely loaded when a Globe Electro-Loader is on the job.

For permanent, temporary, or portable use. Installed in a few hours on any paved or wood surface. Only four base plates to anchor. Or mounted on casters for full mobility if desired.

Clearance of 6'11" under torque tube permits large loads and use of most fork trucks. Lifting capacity is 6000 lbs.

Write for complete information (Form 1-202) Globe Hoist Company, East Mermaid Lane at Queen Street, Philadelphia 18, Penna.

GLOBE Electro-LOADER
PLANTS: DES MOINES—PHILADELPHIA

For more details circle **NED-854 F5** on enclosed inquiry slip

Wheelabrator Steel Shot has proved its ability to cut abrasive costs as much as 60%, 38%, 45% and 57% in hundreds of applications. This electric furnace steel shot not only cleans faster but lasts longer than other abrasives. It provides greater coverage, insures uniform results and cuts maintenance costs. Plus features include 50 lb. carton packaging and palletized shipments to save handling time.

Send for Bulletin 89-B.

American WHEELABRATOR & EQUIPMENT CORP.
WHEELABRATOR STEEL SHOT
508 S. Byrkit St., Mishawaka, Indiana

For more details circle **NED-855 F5** on enclosed inquiry slip

TOOL NO	DIAMETER	SHANK DIA	* PRICE
CB	1/4	3/16	1.30
EC	3/8	1/4	1.85
GD	1/2	3/8	2.40
JF	3/4	1/2	4.60
LI	1	1/2	7.00
PK	1 1/2	3/4	13.65
SM	2	1	20.50

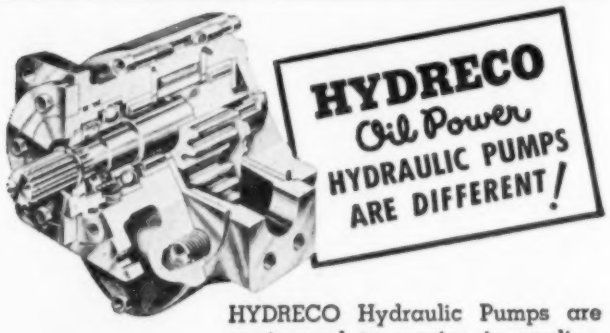
* PLUS 10% IN LESS THAN 10 OF ANY ITEM

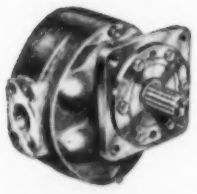
Severance TOOL INDUSTRIES INC.

761 Iowa Avenue—Saginaw, Michigan

Representatives and Distributors in principal industrial areas.

▲ For more details circle NED-856 F5 on enclosed inquiry slip ▲





HYDRECO Series H Hydraulic Pumps for operation of 1500 psi systems deliver 40, 50, 60 or 70 gpm at 1200 rpm.

HYDRECO Hydraulic Pumps are engineered to survive in applications where other, ordinary pumps fail. HYDRECO Pumps are found *operating* wherever the going is rough . . . whenever shock loads, impact and rugged service are "normal working conditions." No other Gear-Type Pump offers these advantages . . . HYDRECO's exclusive *Pressure-Balanced, Four-Bolt Design* and *Hevi-Duty Construction* . . . low initial cost, years of economical, trouble-free operation and dependable, efficient performance.

Your Free copy of Bulletin No. 142 covers the details of HYDRECO Series H Pumps . . . Write for it!

HYDRECO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1108 EAST 222nd STREET • CLEVELAND 17 • OHIO
INTERNATIONAL SALES OFFICE, 90 WEST ST., NEW YORK 6, N. Y.

▲ For more details circle NED-857 F5 on enclosed inquiry slip ▲

▲ For more details circle NED-858 F5 on enclosed inquiry slip ▲

New Literature & Catalogs

Electric Circuit Control Regulator

Electric Regulator Corp.—Direct-action, finger-type electric circuit control regulator designated size 4 Regohm brings finger-type regulation into higher direct-control power ranges. Details and instructions for use of this regulator are provided in 8-page bulletin 6.04. Finger-load rating is 720 w.

▲ For more details circle NED-859 F5 on enclosed inquiry slip ▲

Wirebound Shipping Crates

General Box Co.—King-Size wirebound crates effectively used in shipping machine tools and other big heavy products are described in 8-page brochure. Booklet shows how containers can replace costly custom-built crates in packaging and shipping of equipment weighing up to several tons.

▲ For more details circle NED-860 F5 on enclosed inquiry slip ▲

Solving Roof Problems

Tremco Mfg. Co.—Illustrated with photos and diagrams, 32-page brochure "Solving Roof Problems" thoroughly covers various types of roofs, how they are built, what factors enter into their deterioration and how roof troubles can be diagnosed and treated. Booklet is divided into 15 sections for easy reference.

▲ For more details circle NED-861 F5 on enclosed inquiry slip ▲

Parts Cabinets & Handling Equipment

General Industrial Co.—Transparent plastic drawer See-Thru cabinets for storing all types of small parts are featured in 16-page catalog "Our Guarantee." Materials handling equipment, lockers, storage cabinets, safety ladders, steel trucks and other items for industrial use are also illustrated and priced.

▲ For more details circle NED-862 F5 on enclosed inquiry slip ▲

Industrial Instruments & Equipment

Minneapolis-Honeywell Regulator Co.,—26 page Composite Catalog 5002 contains descriptions of principal types of industrial instruments and equipment. Each description includes reference to more detailed literature. Equipment covered includes potentiometers, thermometers, pressure gages, flow and liquid level meters, systems and components, panelboards, diaphragm motors and other items.

▲ For more details circle NED-863 F5 on enclosed inquiry slip ▲

Recording X-Ray Diffractometer

Jarrell-Ash Co.—How the British-made Hilger x-ray diffractometer is used for qualitative and quantitative investigation of solid crystals is related in 12-page catalog CH322/3. Instrument functions by direct measurement of diffracted intensity using high-speed ratio pen recorder rather than photography. Complete listings of models, accessories and supplementary equipment are also included.

▲ For more details circle NED-864 F5 on enclosed inquiry slip ▲

Multiple V-Belt Drives

Browning Mfg. Co.—Poly-V Drive power transmissions are subject of 36-page catalog PV-200. These multiple V-drives, molded as a single unit running on matching sheaves, combine advantages of V-belts with simplicity of flat belts. Specs on hundreds of sizes of stock sheaves and belts, engineering data on design of drives and stock drive combinations are provided.

▲ For more details circle NED-865 F5 on enclosed inquiry slip ▲

Cathode-Ray Oscillographs

Allen B. Du Mont Laboratories, Inc.—"Quick Reference Instrument Catalog" lists in 8 pages the salient features of cathode-ray oscillographs and accessory instruments. Low and high frequency instruments are covered, and technical information is tabulated.

▲ For more details circle NED-866 F5 on enclosed inquiry slip ▲

Plant & Process Ventilation

"Plant and Process Ventilation" is 448-page work by W. C. L. Hemeon which contains accepted as well as new conceptions of ventilation principles and practices that will enable student or engineer to analyze and solve any type of industrial ventilation problem. Highlights of book include three chapters devoted to fundamentals and one chapter on dynamics of dust particles. Presented for the first time is a theory for estimating air flow induced by motion of solid particles. Problem of ventilating large mill buildings that house processes releasing massive quantities of heat is also treated. This 6 x 9-in., cloth-bound book is offered for $9 by The Industrial Press, 93 Worth St., New York 13, N. Y.

▲ For more details circle NED-867 F5 on enclosed inquiry slip ▲

▲ For more details circle NED-868 F5 on enclosed inquiry slip ▲

RUST-VETO 344

HOUGHTON'S answer to most of your OUTDOOR rust prevention problems!

GET LATEST BULLETIN. Ask the Houghton Man or write E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Pa.

RUST-VETO 344 developed by Houghton primarily for long-lasting outdoor protection of steel, brass, aluminum and copper. In this *one* multi-purpose rust preventive you get all these advantages:

- Fast-drying—handle 4 hours after applying
- Tough, thin (.003") film is rosin-free
- Won't harden, crack or peel in use
- Easily cleaned off with solvent soaked cloth
- Safely withstands 30 cycles in 100° humidity

RUST-VETO 344 . . . a product of

E. F. HOUGHTON & CO.
PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO

Ready to give you on-the-job service . . .

▲ For more details circle NED-869 F5 on enclosed inquiry slip ▲

BUDAmatic

the 1st TORQUE CONVERTER IN A FORK LIFT TRUCK

Stops . . . Holds . . . Starts . . . On 20% Grade

Not to be confused with an electric transmission or fluid coupling, the Budamatic Converter Drive is more simple, more efficient and provides unequaled ramp climbing and traction. No external piping is required. Inexpensive oil is used as a driving fluid. Built-in cooler maintains proper operating temperature. Low fluid pressure eliminates costly sealing arrangements. Budamatic Converter Drive increases engine life up to 50%! Remember—for extra value, count on Buda!

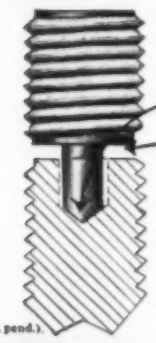
Here's the inside story of Buda Fork Lift Trucks. Write for your copy today!

ALLIS-CHALMERS MANUFACTURING CO.
BUDA DIVISION • HARVEY, ILLINOIS

▲ For more details circle NED-870 F5 on enclosed inquiry slip ▲

Send for FREE Bulletin on
IMPROVED 2-SCREW METHOD

Pivot-Lok Set Screws



For jobs using two screws for security purposes, or where vibration is a factor.

Pivot on top screw acts as a bearing. Pivot avoids friction between the two screws and prevents damage to the lower socket. Pivot screw can be furnished with any type of self-locking thread such as Zip-Grip, Off-Set, etc. Provides positive holding action, but both screws easily removed when desired. Send for new illustrated bulletin giving full data.

(pat. pend.)

Set Screw & Mfg. Co.

130 Main St., Bartlett, Ill. (Chicago Suburb)

We Specialize in Solving Puzzling Set Screw Problems

For more details circle NED-871 F5 on enclosed inquiry slip

FREE WALL CHART
Gives recommended tool room wheel gradings

EVERY TOOL ROOM needs a copy of this new wall chart just released by THE CARBORUNDUM COMPANY. It contains recommended wheel gradings for grinding high speed tool and die steels with CARBORUNDUM's popular new V40 Bond Tool Room Wheels. The various standard types of V40 Bond Wheels are illustrated and identified for easy reference. Classes of work, including the sharpening and backing off of broaches, sharpening of milling cutters and reamers, surface grinding operations, use of wheels on flat forms, for slotting, and on circular form tools, are all given in detail. The type of V40 Bond Wheel and grading best suited to each operation is clearly defined.

TOOL ROOM FOREMEN will find this new chart a handy and convenient help in ordering and using V40 Bond Wheels. It's colorful, printed on sturdy, heavy-weight cardboard, and punched at the top for hanging on a nail or hook.

ADVANTAGES claimed for the new line of V40 Bond Wheels include faster cutting and exceptionally cool grinding—even on high speed steels and hi-vanadium types. In addition, the wheels have outstanding form-holding ability, which permits completing a job with only one set-up... eliminates stops for wheel dressing and resetting-up halfway through a job.

GET YOUR FREE WALL CHART today, and use V40 Bond Tool Room Wheels in all your tool room grinding operations. Use the inquiry card provided by this publication, or if you prefer, write **The Carborundum Company,** Dept. NED 81-59, Niagara Falls, New York. *Adv.*

"Carborundum" is a registered trademark of The Carborundum Company, Niagara Falls, New York

81-59

For more details circle NED-872 F5 on enclosed inquiry slip

New Processes & Materials

CONDUCTIVE LUBRICANT
for conducting hinge joint switches

Lubricating qualities of Conducto-Lube, a highly conductive lubricant, can be used on knife blade switches to prevent their "freezing" and to reduce resistance and heating. It is also suitable for high speed, air blast breakers. Illustration shows conductivity by a low voltage test in a jar of the lubricant, with the current illuminating the bulb. It is offered in 6-oz jars at $9.75. Made by **Conducto-Lube Co.,** Dept. NE-d, 8603 S.W. Seventeenth Ave., Portland 19, Oreg.

For more details circle NED-874 F5 on enclosed inquiry slip

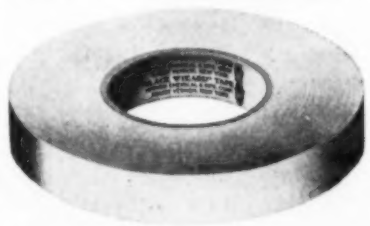
RUST PREVENTIVE COATINGS
burn cleanly from metal parts

Developed to protect metal parts during storage, series of Ucon rust-preventive fluids can be burned cleanly from metal surfaces for processing of parts. Burning leaves no residues that will interfere with painting, welding, soldering, brazing or annealing. Coatings can also be removed with solvents or, in some cases, by mild scouring with water. Fluids are available in several viscosity grades. They have negligible solvent or swelling effects on various types of rubber, and can be used diluted or undiluted. Made by **Carbide & Carbon Chemicals Co.,** 30 E. 42nd St., New York 17, N. Y.

For more details circle NED-875 F5 on enclosed inquiry slip

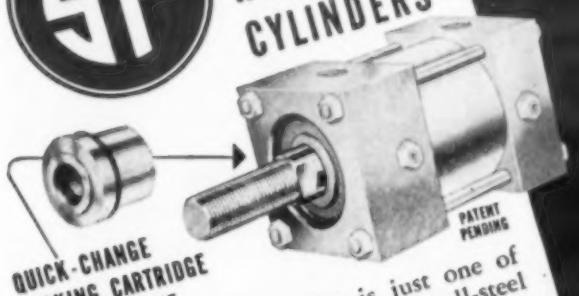
FILAMENT TAPE
for strapping, bundling, reinforcing

Continuous strands of high tenacity viscose rayon reinforce the entire length of Black Wizard tape, giving it a tensile strength of 220 lb per inch of width. Suitable for strapping, bundling, palletizing and reinforcing, it has 50 oz per inch pressure-sensitive adhesive which leaves no stain or residue when removed. Moisture resistant tape is easily cut but impossible to tear. Made by **Vernon Chemical & Mfg. Corp.,** Dept. NED, 151 Mt. Vernon Ave., Mt. Vernon, N. Y.



For more details circle NED-876 F5 on enclosed inquiry slip

SP AIR and HYDRAULIC CYLINDERS



QUICK-CHANGE PACKING CARTRIDGE CUTS DOWNTIME

Removable packing cartridge is just one of many modern design features of S-P all-steel cylinders. Made in a wide range of mountings and bore sizes. Prompt deliveries. Send for catalog on Hydraulic Cylinders or Standard Air Cylinders or Heavy-Duty Air Cylinders. The S-P Manufacturing Corp., 12415 Euclid Avenue, Cleveland 6, Ohio.

SEND FOR Catalog

SP

THE S-P MFG. CORP.—Cleveland
A Bassett Company
PRECISION PRODUCTS SINCE 1916
AIR AND HYDRAULIC CYLINDERS • POWER CHUCKS • ROTATING CYLINDERS
COLLET AND DRILL PRESS CHUCKS • AIR PISTONS
VALVES AND ACCESSORIES

For more details circle NED-877 F5 on enclosed inquiry slip

336,000 miles of extrusions!

Our extruders have turned out enough plastic and rubber extrusions to reach to the moon and halfway back. In compiling this vast experience General Tire's Industrial Products Division has supplied thousands of original equipment manufacturers with just about every known type of extrusion. No job is too large, too small or too complicated for our design and production staff. Perhaps *you* can benefit from the fantastic extrusion mileage we've accumulated down through the years.

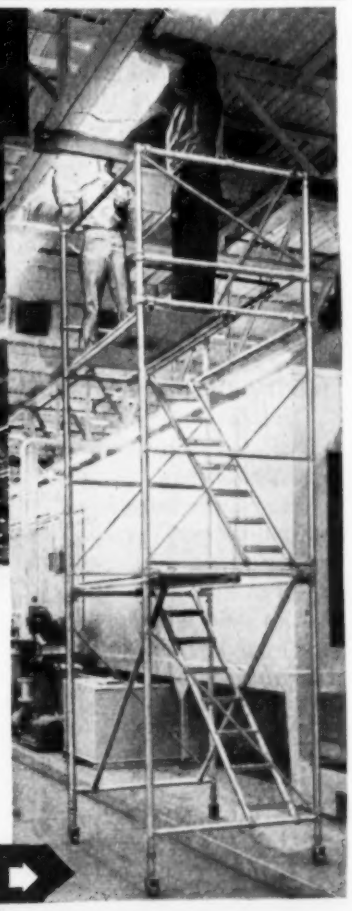
For literature or further information write to The General Tire & Rubber Company, Wabash, Indiana, Department A-2.

"From Plans to Products in Plastics and Rubber"

THE GENERAL TIRE
Industrial Products Division
WABASH INDIANA

For more details circle NED-878 F5 on enclosed inquiry slip

45 acres of fixtures at new Ford plant maintained at lower cost with UP-RIGHT Scaffold-on-wheels



This ALUMINUM ALLOY scaffold provides the most economical and practical means to maintain overhead equipment in any plant, large or small. A tower of any height desired is ready in minutes. Individual 1-piece sections are unfolded and set one on top of the other. They lock into place instantly . . . no tools, wing nuts or bolts.

Your maintenance costs can be reduced by Up-Right Scaffold-on-wheels.

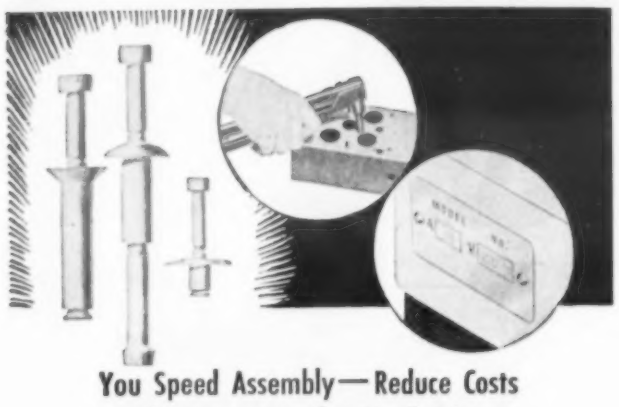
Write for descriptive circular

"UP-RIGHT" SCAFFOLDS
Dept. 144 • 1013 Pardee Street • Berkeley, Cal.

Factories: Berkeley, Cal. & Teterboro, N. J. Offices in all principal cities.

17 ft. tower scaffold assembled in 2 minutes by 2 men

For more details circle NED-873 F5 on enclosed inquiry slip



You Speed Assembly—Reduce Costs

with Townsend Blind Rivets

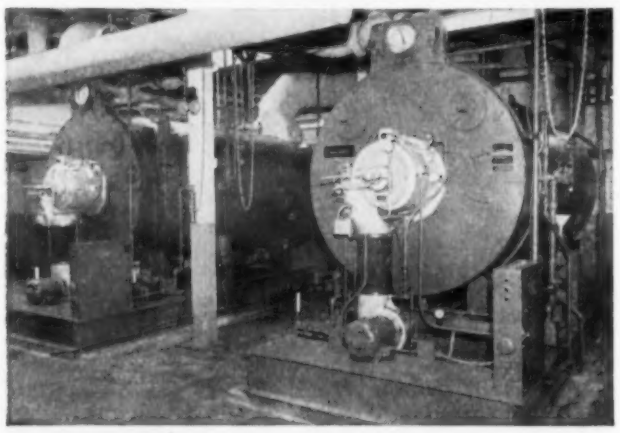
In a split second, one man can install this tamper-proof, vibration-resistant blind rivet to give you secure fastening in many applications that otherwise would be slow and expensive.

Townsend blind rivets are installed by one man from one side of the work and are used extensively in blind and limited clearance operations. They provide high clinch and a strong fastening—are ideal for installation of name plates and serial numbers on any unit which must retain its original identity. Radio-TV components are assembled quickly—awnings, jalousies, screens, storm doors and windows are fabricated with ease. Write for Bulletin TL-99.

Townsend Company

NEW BRIGHTON, PENNSYLVANIA

For more details circle NED-879 F5 on enclosed inquiry slip



Powermasters

Save $9,040 a Year; Cut Steam Costs in Half

● These two 200 HP *Powermaster* Packaged Automatic Boilers are saving 50% of steam costs annually for a large clothing manufacturer, in addition to providing hotter, drier steam for processing and comfort heating.

Now, you can put completely factory assembled and fire-tested *Powermasters* in your plant or building on the Pay-As-You-SAVE Purchase Plan, that lets you pay for your new boiler out of its own savings. Compare these *Powermaster* advantages:

- ★ Low-cost, space-saving installation
- ★ Instant response to load changes
- ★ Quick fuel change-overs
- ★ Clean, dry steam
- ★ Automatic operating and safety controls
- ★ High fuel economy at all loads
- ★ Clean, quiet operation
- ★ Smokeless combustion
- ★ One source responsibility for design, construction and service
- ★ Nation-wide factory-trained representatives
- ★ Pay-As-You-SAVE Purchase Plan

Write for this Bulletin today!
Get all the facts on *Powermaster's* cost-saving features.

Powermaster®
PACKAGED AUTOMATIC BOILERS
In sizes to 500 HP; pressures to 250 psi.

ORR & SEMBOWER, INC.
Established 1885 • Morgantown Road, Reading, Pa.

For more details circle NED-880 F5 on enclosed inquiry slip

New Literature & Catalogs

Pipe & Tube Plugs & Caps

Ray A. Scharer & Co.—Available sizes and specifications of Shurclose plugs and caps of rubber and plastic are listed in 4-page bulletin 55-1. These easily-applied units can be used for protecting, sealing or masking of tubing, fittings, hydraulic components and machined parts.

For more details circle NED-881 F5 on enclosed inquiry slip

Thermostatic Control Valves

Lawler Automatic Controls Inc.—Temperature regulators, tempering valves, shower valves, water controllers, water pressure equalizers and photographic control assemblies are described in 8-page illustrated catalog C-6.

For more details circle NED-882 F5 on enclosed inquiry slip

Plastic Tooling Materials

Furane Plastics Inc. — Epocast laminating and casting type tooling resins for automotive, aircraft and commercial tooling and production of foundry patterns are subject of 8-page illustrated bulletin. Properties and applications of various types of resins for tooling are presented.

For more details circle NED-883 F5 on enclosed inquiry slip

Aluminum Forgings

Harvey Aluminum—The advantages of aluminum forgings are explained in illustrated guide book. The 12-page text describes press forgings, impact extrusions and hand forgings. Mechanical properties of aluminum forging alloys are enumerated, and typical forging applications are summarized.

For more details circle NED-884 F5 on enclosed inquiry slip

Folding, Portable Tables

Sico Mfg. Co.—A complete line of folding, portable tables, some equipped with folding seats, is described in 8-page illustrated bulletin 55. Explained also is the Sico system of industrial plant cafeteria seating.

For more details circle NED-885 F5 on enclosed inquiry slip

Precision Dies & Tools

Lamina Dies & Tools, Inc.—20-page illustrated booklet shows modern facilities, production methods and engineering services offered by this company in the production of progressive, lamination and gear dies to customer specifications. Fixtures and special machines are described also.

For more details circle NED-886 F5 on enclosed inquiry slip

Jig & Fixture Components

Jergens Tool Specialty Co.—Stock sizes of chuck jaw blanks, handles, knobs, wheels, clamp assemblies and other jig and fixture components are detailed in 64-page illustrated catalog. Part sizes are specified in detail, and simple ordering system which eliminates errors is explained.

For more details circle NED-887 F5 on enclosed inquiry slip

Enclosed Motor

U. S. Electrical Motors Inc.—Cut-away views of improved type H Uniclosed motor illustrate its construction features in 12-page booklet. Ventrifoil at both air intakes protects the interior, and entrance of water or dust is prevented. Motor conforms to NEMA specifications and has the same standards as the former model in temperature rise, torque and other characteristics, but has more horsepower per cubic inch.

For more details circle NED-888 F5 on enclosed inquiry slip

Joining Stainless Steels

Crucible Steel Co. of America—Seventeen methods of joining stainless steel by fusion processes are detailed in 24-page booklet "The Joining of Crucible Rezistal Stainless Steels." Processes include manual, automatic and semiautomatic welding, brazing and soldering, as well as eight flame and arc cutting procedures.

For more details circle NED-889 F5 on enclosed inquiry slip

Carbide Tools

Allegheny Ludlum Steel Corp.—Aid to users of Carmet cemented carbide tools in selection, fabrication and application of tools and blanks is provided by 20-page illustrated "Methods Manual" (eighth edition). Various grades are described, and instructions and drawings are included covering all operations and tool types.

For more details circle NED-890 F5 on enclosed inquiry slip

NEW from FULTON SYLPHON TEMPERATURE REGULATOR HEADQUARTERS, U.S.A.

FULTROL THERMOSTATIC PILOT CONTROLLER No. 1100

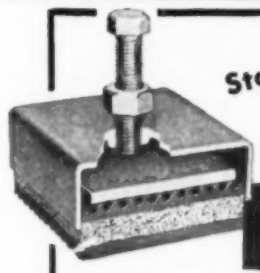
For Trouble-Free, Accurate Control of Liquids or Air Temperature, Find Out about the New Fultrol Thermostatic Pilot Controller. Its simplified, compact design employs No Troublesome Levers or Pivots. Used in conjunction with valves or dampers it offers rapid response Over Temperature Ranges of 50°-250°F. or 150°-350°F. Control action can be quickly Reversed in the Field, and temperature differential adjusts by simple screwdriver setting from 5° to 25°F. Handles jobs not practical with self-operated regulators alone.

Robertshaw-Fulton CONTROLS COMPANY

For descriptive literature write for Bulletin LY-D.

FULTON SYLPHON DIVISION • KNOXVILLE 1, TENN.

For more details circle NED-891 F5 on enclosed inquiry slip



Stop Vibration
Mobilize Machinery
Cut Noise

NEW!

KORFUND LEV-ELASTO DAMPERS

That's right! Since the NEW Korfund LEV-ELASTO Dampers don't require bolting to the floor, you now can give your machinery the *added plus* of mobility and maneuverability.

Change your lines to best handle each production run easily and without the annoyance and potential damage to work and facilities caused by transmitted vibration.

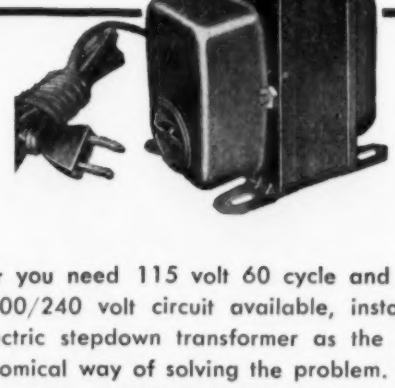
And, you can throw away your shims, too—LEV-ELASTO Dampers eliminate the need for them. A wrench is the only leveling tool you need.

Find out more about Korfund's new LEV-ELASTO Dampers. Write today for your copy of Bulletin 24.

THE KORFUND CO., INC.
KORFUND VIBRATION CONTROL — SPRINGS · RUBBER · CORK
48-35P Thirty Second Place, Long Island City 1, N. Y.
In Canada: 510 Canal Bank, Ville St. Pierre, Montreal

For more details circle NED-892 F5 on enclosed inquiry slip

WHERE CAN A STEPDOWN TRANSFORMER SERVE YOU?



Whenever you need 115 volt 60 cycle and have only a 200/240 volt circuit available, install an Acme Electric stepdown transformer as the quick and economical way of solving the problem. Compact and complete with primary cord and plug, built-in secondary receptacle. Capacities from 85 to 1000 watts. 2KVA unit has large box with knockouts for conduit connection. Write for Bulletin 179.

Acme Electric

ACME ELECTRIC CORPORATION
306 WATER ST. CUBA, N. Y.
West Coast: 1375 W. Jefferson Blvd., Los Angeles, Calif.
In Canada: Acme Electric Corp. Ltd., 50 Northline Rd., Toronto, Ont.

For more details circle NED-893 F5 on enclosed inquiry slip

No other valve can match the low-cost Skinner V5 in strength of construction and general utility. UL-approved for all-purpose service, it is suitable for all common media and most vacuum applications.

The Skinner V5 gives fast, dependable operation . . . through millions of cycles. It is direct acting, spring loaded, leakproof, and performs perfectly in any position. Inspection is easy because it can be disassembled without removal from the line. Separate operators are available, as well as a broad selection of electrical outlets, port locations and sizes, flow adjustments and coils.

SPECIFICATIONS: Type—two- or three-way, normally open or normally closed, or with directional control; Pressure Range—0-1000 p.s.i.; Duty Cycle—continuous or intermittent; Orifice Diameter: 3/16" to 3/64"; Pipe Size: ⅛", ¼" or ⅜"

NPT; all common AC, DC voltages.

World-wide representation

SKINNER ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY

SKINNER SOLENOID VALVES

Write for Bulletin 501

112 Edgewood Ave.
New Britain, Conn.

THE CREST OF QUALITY

▲ For more details circle NED-894 F5 on enclosed inquiry slip ▲

NEW!

low cost 1-3/4 roller *for medium duty* CONVEYOR SYSTEMS

This new, lighter weight Rapistan 1¾" roller is lower in cost, sturdy and efficient. Rollers are available in 12" and 18" frames, 5 ft. and 10 ft. sections with up to 1500 lb. capacity. Curve sections available for complete line systems.

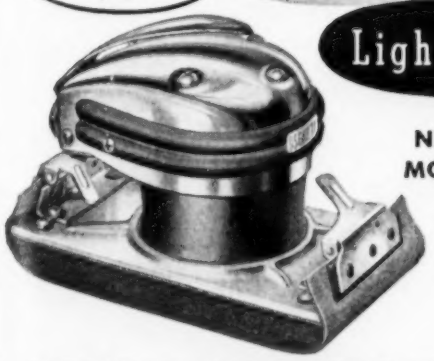
FREE *Rapistan's big new 1955 catalog of conveying equipment for every need. Or write for case history "Field Reports" on your specific industry.*

Rapistan

The RAPIDS-STANDARD CO., Inc.
473 Rapistan Bldg.
Grand Rapids 2, Mich.

▲ For more details circle NED-895 F5 on enclosed inquiry slip ▲

Fast POWERFUL Lightweight



NATIONAL MODEL 400

CUTS FINISHING COSTS!

National Sanders are made for tough use on production lines. Properly used, they will cut sanding time up to 75% over hand sanding . . . reduce operator fatigue . . . and, at the same time, produce a better finish. These lightweight, vibration-less block sanders can be used on wood, metal, plastic, felt, stone, and other surfaces. Write for more information today.

NATIONAL NS SANDERS

NATIONAL AIR SANDER, INC.
2818 AUBURN ST., ROCKFORD, ILL.

▲ For more details circle NED-896 F5 on enclosed inquiry slip ▲

New Processes & Materials

STENCIL INK
aluminum color in spray can

Aluminum is the eighth color available in Reynolds Quick Spraying stencil ink, packaged in spray cans. Waterproof and weatherproof ink can be used for stenciling of cartons, crates, boxes, metal and other materials, as well as for color identification and inspection marking. Quick-drying ink is packaged in 12-oz cans. Made by **Reynolds Ink, Inc.**, Dept. N, 4500 Euclid Ave., Cleveland 3, O.

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CUSHIONING MATERIAL
offered in several weights of paper

Permanently crimped in two directions under high temperatures and pressures, Carbion fiber cushioning material has a high degree of impact absorption and compression. It has four major and two minor impact dispersion patterns. This product-protecting packaging material is available in a variety of flexible sleeves, sheets and rolls in several types and weights of paper. Made by **Sherman Paper Products Corp.**, Dept. J, Newton Upper Falls 64, Mass.

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SOLDERING FLUX KIT
includes types for all purposes

Soldering fluxes for complete range of operations such as printed circuit, electronic and general purpose are contained in the 16 labeled jars of this soft soldering Flux Kit. Charts in lid of carton serve to guide in the selection of the proper flux for each soldering job. Special fluxes can be compounded to suit individual needs. Price is $6.50. Offered by **Alpha Metals, Inc.**, 57 Water St., Jersey City 4, N. J.

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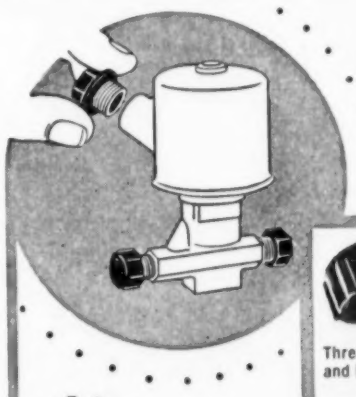

CUT Shipping Losses this low-cost way

S.S.WHITE PLASTIC PLUGS AND CAPS are the ideal way to protect threaded and unthreaded parts against losses due to damage, dirt, moisture and loss of fluids or lubricants. Easy to apply—easy to remove, they're a "must" during shipment, storage or maintenance.

Samples and literature on request. Write Dept. 7P. C-1

THE S.S.White PLASTICS DIVISION
DENTAL MFG. CO.
10 East 40th Street
New York 16, N.Y.
Western District Office • Times Building, Long Beach, California

▲ For more details circle NED-900 F5 on enclosed inquiry slip ▲

cut weld cleaning time by 85%

Throw away your cold chisel and whisk off weld spatter with a dry rag! Protect-O-Metal spatter-proofing compounds make weld cleaning a breeze. Improve your welds at the same time - - P-O-M compounds quiet the arc, improve fusion and electrode operation, prevent oxidation and annealing scale, cause no porosity. No smoke, odors, or fumes.

P-O-M No. 2. Non-inflammable, non-toxic, water-soluble paste. Inorganic. Thin before applying and start welding at once. $3.25 per gallon, f.o.b. Dayton.

P-O-M No. 8. Rust- and corrosion-resistant resin base compound. Comes ready to use. Safe for all metals. Good paint primer; permits outdoor storage of subassemblies. $3.30 per gallon, f.o.b. Dayton.

MONEY-BACK TRIAL OFFER

Order a trial gallon of each today for testing in your shop. We'll cancel the bill if you're not satisfied.

PROTECT-O-METAL
G. W. SMITH & SONS, INC. 5406 KEMP ROAD, DAYTON, O.

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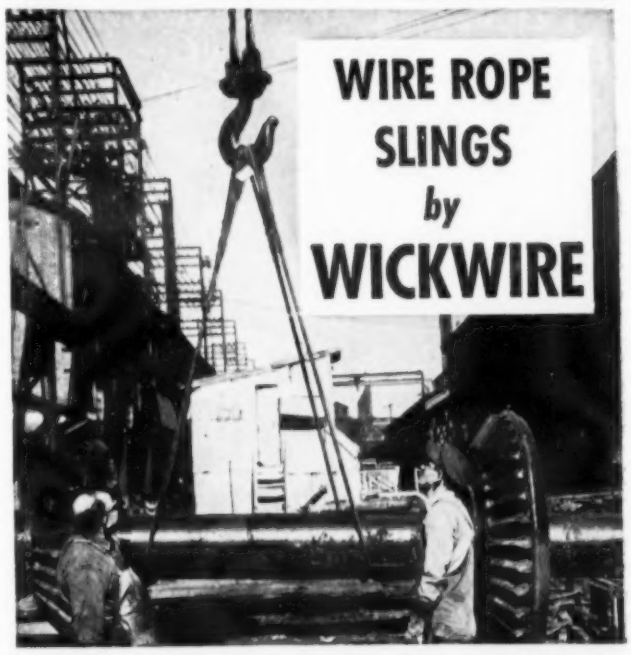

Wickwire Rope slings are offered in both braided and single-part construction to meet a wide variety of service requirements. For additional information write to Wire Rope sales office, Palmer, Mass.

WICKWIRE ROPE
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

2602

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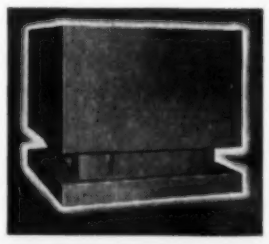
Don't Let SUMMER Catch You Unprepared

Use Hartzell Man Coolers To Blast Away "Hot Spots"



Use Hartzell Roof Ventilators To Exhaust Heat and Fumes

Let your nearby Hartzell field engineer help you pick the right equipment to keep your production up during even the hottest weather. Call him today.

HARTZELL propeller fan co.
Div. of Castle Hills Corp.
Dept. G. PIQUA, OHIO

ENGINEERING OFFICES IN PRINCIPAL CITIES

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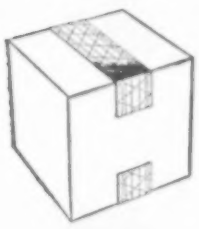
The SNAKE TAPE Idea



.. use 2 strips only!

NOW ACCEPTABLE for Rail Shipments under U.F.C. Rule 41

IT'S 2/3 FASTER because you seal only the two center seams!

IT'S 35% STRONGER because *reinforced* Snake Tape has strap-like strength. *Strength* you'll find in no other gummed tape because it's reinforced with *rayon* yarns . . . the same rayon yarns used in the best auto tires for superior shock absorbence.

PROVE TO YOURSELF, and at our expense, how much you can save in sealing time and in damage claims. Send for FREE sample of Angier Snake Tape now.

Free - 15 yd. sample

ANGIER CORPORATION • Framingham 30, Mass.

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FOR DEFENSE INDUSTRY MACHINIST WORKMAN FARMER

1ST IN METAL TOOL BOXES

CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition.

WATERLOO METAL BOXES AND CHESTS

Write for FREE book, including complete information.

Waterloo

VALVE SPRING COMPRESSOR CO. WATERLOO, IOWA

▲ For more details circle NED-906 F5 on enclosed inquiry slip ▲

REMEMBER THE NAME . . . Rubyfluid

the easy-to-use Soldering Flux for neat, strong unions.

Use Rubyfluid Flux—liquid or paste—to get neat, strong unions speedily and easily. Rubyfluid is a special fast acting formula, wets out freely, is free from harmful and objectionable fumes, economical to use. Try it—send $1 for special offer—1 pt. liquid, ½ lb. paste flux and helpful booklet.

For Stainless Steel use *Ruby's Stainless Steel Flux*, perfected for that metal.

RUBY CHEMICAL CO.
72 S. McDowell Street Columbus 8, Ohio

Rubyfluid

▲ For more details circle NED-907 F5 on enclosed inquiry slip ▲

New Literature & Catalogs

Modern Material Handling

Thomas A. Edison, Inc., Edison Storage Battery Div.—Revised 32-page publication on "Modern Material Handling" includes up-to-date illustrations of modern industrial trucks with latest material-handling attachments. Publication is devoted to unit-load principle, power requirements of industrial trucks and the characteristics of nickel-iron-alkaline storage batteries.

▲ For more details circle NED-908 F5 on enclosed inquiry slip ▲

Facilities Brochure

O & M Machine Co.—Facilities of this company described and specified in 24-page brochure include special production and duplicating equipment; heavy and light machine shop; aircraft traveling cranes; metal and welding fabrication equipment; and engineering, tooling and testing facilities. Production samples of aircraft parts and segments are also highlighted.

▲ For more details circle NED-909 F5 on enclosed inquiry slip ▲

Tapping Attachments

Tapmatic Corp.—Operation of both the Tapmatic and Tapmaster tapping attachments is described in 4-page folder. Both attachments feature "weightless" cutting action in which tap floats in and out of the hole. The Tapmatic is designed for nonreversible spindles while the Tapmaster is for reversible spindle machines.

▲ For more details circle NED-910 F5 on enclosed inquiry slip ▲

Synchros, Servos, Motors

John Oster Mfg. Co., Avionic Div.—Wall-chart type technical data sheet describes typical units in company's line of synchros, servo torque units, ac drive motors, dc motors, ac servo motors, tachometer generators, actuators, and motor-driven blowers and fan assemblies.

▲ For more details circle NED-911 F5 on enclosed inquiry slip ▲

LP-Gas Pumps

Viking Pump Co.—Catalog section H contains 10 pages of design and engineering data on positive-displacement rotary pumps with capacities of 8 to 90 gpm which operate at maximum differential pressures of 100 psi and maximum operating pressures of 400 psi. They will handle both LP-gas and anhydrous ammonia. Bulk station, fueling, unmounted and truck mounting styles are described.

▲ For more details circle NED-912 F5 on enclosed inquiry slip ▲

Regenerative Turbine Pumps

Roy E. Roth Co.—Recommended for a range of pressures from 100 to 300 psi and capacities from 10 to 280 gpm, two-stage regenerative turbine pumps have excellent hot water handling characteristics due to large passages between stages. Illustrated 12-page bulletin 107 covers principle of operation, mechanical seals available, performance and other data.

▲ For more details circle NED-913 F5 on enclosed inquiry slip ▲

Semiautomatic Weighing Machines

Exact Weight Scale Co.—Precise visual indication of every weighment as it is made is given by the Exact Weight "over and under" semiautomatic weighing machines, described and illustrated in a folder. Scale unit is fed by vibratory feeders. Extensive line for packaging, batching, bagging, compounding or feeding wide variety of commodities is covered.

▲ For more details circle NED-914 F5 on enclosed inquiry slip ▲

Motorized Pumps

Ingersoll-Rand Co., Cameron Pump Div.—Entire line of close-coupled Motorpumps from ¼ to 75 hp with deliveries of 5 to 2800 gpm is covered in 24-page bulletin 7093-E. Index shows basic classifications of pumps covered and their specifications. Each class is described and illustrated in detail, with modifications that can be made and performance data being included.

▲ For more details circle NED-915 F5 on enclosed inquiry slip ▲

Electrolytic Grinding

Anocut Engineering Co.—How electronic control makes possible automatic electrolytic grinding of cemented carbide tools is subject of 12-page manual "The New Electrolytic Shaping Method." Offhand grinding, chip breaker grinding, surface finishing, and other operations are explained with the lab and shop test data on cutting time, diamond wheel cost savings and labor savings.

▲ For more details circle NED-916 F5 on enclosed inquiry slip ▲

EACH TOPS IN ITS FIELD

GUSTO ORBITAL SANDER

High efficiency on flat or curved surfaces . . . vertical or horizontal . . . even tight spots right to edges. No belts or gears. Reliable, durable sander for wood, metal, plastics, plaster, paint, etc. Largest sanding pad of any hand sander. Exclusive safety hard rubber handle withstands shocks up to 1000 volts.

LESTO

LESTO Electric HAND SAW

Swiss watch precision in a heavy-duty portable hand-saw! That's the secret of LESTO cutting speed and accuracy. 2300 strokes per minute cut so fine sanding is unnecessary. A true all-in-one saw: rip, scroll, band, jig, cross-cut, coping, keyhole—cuts inside holes without a starting hole . . . cuts 2" wood beams . . . soft metals, plastics, cement sheet, etc

LESTO Electric SHEARS

For all sheet-metal work up to 16 gauge. Compact design, handy shape. Perfect for hard-to-reach places. Cutting speed 5 ft./min. Weight 3¼ lbs. Larger model cuts up to 12 gauge. Weight 6½ lbs.

Write for Literature

Sold and Serviced in Principal Cities Throughout U.S.A.

VICTOR J. KRIEG, Inc.

Exclusive Importer

611 Broadway, New York 12, N. Y.
GRamercy 7-5757

▲ For more details circle NED-917 F5 on enclosed inquiry slip ▲

NEW Aerovent low-speed belt-driven LS FANS

New Aerovent "LS" Belt-Driven Fans, designed with new 4-blade "Macheta" Airfoil Propellers, provide high-volume air movement with slower motor speeds and lower horsepower requirements.

Available in sizes 24" to 48" for capacities to 31,800 CFM, they offer greater efficiency and economy against resistances to ¾" SP than direct-driven types operated at identical horsepower ratings.

write for free folder L-750

Certified Ratings

All Aerovent Fans are rated in accordance with the Standard Test Code and U.S.D.C. Comm. Std. CS178-51.

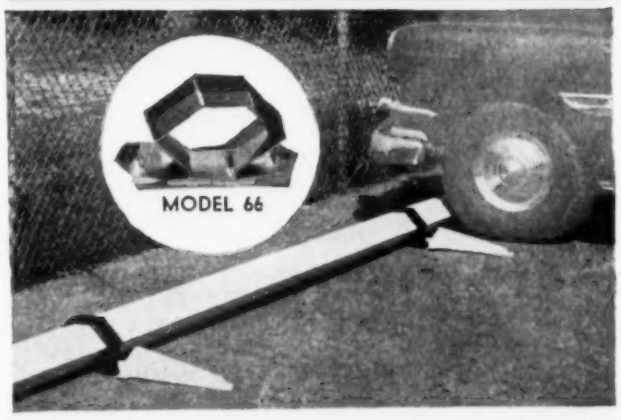
Aerovent Fan Company, Inc.

Ash and Blake Streets Piqua, Ohio

▲ For more details circle NED-918 F5 on enclosed inquiry slip ▲

Park cars • trucks busses • all types vehicles

The HARRIS-BARRIER Way



Don't worry when the "Cowboys" try to "bulldog" this number. Extra strength cast brackets support 6 x 6 dimensional timbers and make Har-Bar's Model 66 the ideal barrier for commercial and truck use.

INSTALLATION—Simplicity itself; just line up and drive the new improved ground spikes. HAR-BAR installs on any surface; Black Top, Concrete, Macadam, Gravel, Sand or Cinders.

Give dimensions and shape of your parking area. Harris-Barrier engineers will prepare *your* engineering kit without obligation!

HARRIS-BARRIER, INC.
Parking Engineers
916 E. 23rd Street
INDIANAPOLIS 18, INDIANA

HAR-BAR

▲ For more details circle NED-919 F5 on enclosed inquiry slip ▲

See how you Can SAVE Time and Money

With PALMGREN

RAPID CABLE AND TERMINAL CONNECTORS

For any welding operation, you can speed up production and save cable with Palmgren Rapid Cable and Terminal Connectors. You can hook-up, lengthen, shorten or replace lines in seconds with a twist of the wrist, with the assurance of positive holding and full conductivity every time. No shorting, fire hazards or equipment damage . . . joints are securely locked . . . no parts exposed . . . will handle cable sizes 1, 1/0, 2/0, 3/0 and 4/0. Makes equipment readily accessible to every job. Made in Solder, Solderless and Thermic types for use in welding, mining, supply lines, ships, railways—wherever conductor cables are used. Send for catalog 426 for full details and prices.

CHICAGO TOOL AND ENGINEERING CO.
8378 South Chicago Ave.
Chicago 17, Illinois

For more details circle NED-920 F5 on enclosed inquiry slip

OFF SHELF DELIVERY!

New COMPACT DESIGN SAVES UP TO 40% SPACE!

Proven PERFORMANCE WITH EXTRA HIGH SAFETY FACTOR!

T-J Spacemaker CYLINDERS

OIL pressure to 750 — AIR to 200 P. S. I.

Now the sensational new T-J Spacemaker sets the pace in compact cylinder design and efficient performance! New "Self-Aligning" adjustable oil cushion means faster acceleration and better cushion than ever before . . . New T-J Super Cushion Flexible Seals for air insure positive cushion with automatic valve action for fast return stroke.

More plus features include—heavy wall, precision honed, hard chrome plated, seamless steel body . . . leakproof cylinder head to body construction . . . heavy duty, high-tensile, *hard chrome plated piston rod.* Write for bulletin SM-454-2. The Tomkins-Johnson Co., Jackson, Mich.

T-J TOMKINS-JOHNSON
RIVITORS...AIR AND HYDRAULIC CYLINDERS...CUTTERS...CLINCHORS

For more details circle NED-921 F5 on enclosed inquiry slip

SPEED UP HAMMER AND TOOL OPERATIONS

WITH THIS NEW 20 OUNCE 5 INCH (O.A.L.) BANTAM BULLY AIR HAMMER

Uses 6.5 cubic feet of air per minute at 80 p.s.i. Delivers from 0 to 13,000 completely controllable blows per minute as a result of Superior's exclusive metering trigger.

38 Tools Available For 150 Different Jobs

Each tool designed specifically for use with the Bantam Bully. Blank shanks available for new applications in your particular field.

Scaling Tools
Flat Chisels
Routing Chisels
Flat Sharp Edge Chisel
Flat Long Chisel
Peening Tools
Finishing and Forming Tools
Wedge Drivers
Oil Grooving Chisel
Star Drills
Sheet Metal Cutters
Shear Cutter
Cape Chisel
Spoon Face Chisels
Muffler Cutter
Round Hose Hollow Gouges
Wood Working Chisels
Wood Gouge

Write for further information to

SUPERIOR PNEUMATIC & MANUFACTURING, INC.
Main Office & Factory 4758 Warner Rd. Cleveland 25, Ohio
West Coast Office 15615 Arrow Highway Azusa, California
Canadian Office 347 Cannon Street, East Hamilton, Ontario

For more details circle NED-922 F5 on enclosed inquiry slip

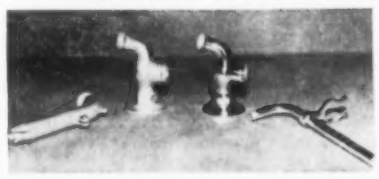
New Processes & Materials

LIQUID BRAZING AID controls alloy surface flow

Used with all nonferrous metals, including titanium and with most alloy steels, including stainless, Nicrobraz Green Stop-Off liquid controls flow of copper, nickel and silver brazing alloys across surface of any type brazed assembly. Liquid is valuable in protecting threads, splines, small orifices, knurled areas and cast surfaces by precisely limiting area in which brazing alloy is allowed to flow. It coats surface of part with thin layer of black nonreducible metal oxide which is inert and does not contaminate controlled brazing atmosphere. Liquid can be thinned with lacquer thinner and applies by brushing, spraying or dipping. Developed by **Wall Colmonoy Corp.**, Stainless Processing Div., 19399 John R St., Detroit 3, Mich.

For more details circle NED-923 F5 on enclosed inquiry slip

CHROMIUM PLATING PROCESS deposit free from pores and cracks, is applied with standard equipment



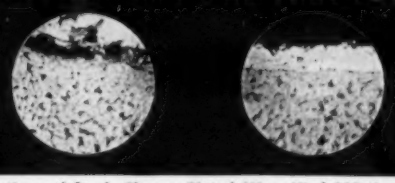
Chromium deposited directly on steel in a dense, continuous structure by this production plating process is free from pores and cracks and provides a practically impenetrable barrier to corrosion. No undercoat or other metal is required. Properties of Crack-Free Chromium deposit include low coefficient of friction, excellent adhesion, nongalling surface and good ductility. It has a light gray matte appearance which can be buffed to a high luster.

Plating is done with a special chromic acid type bath having automatic regulation of the catalyst concentration. Standard plating equipment and procedures are used. Bath is prepared by dissolving the proper amount of a single compound, Unichrome SRHS compound CF-500, in water. Deposit remains crack-free when heated to 1000° F and plunged into water. Plating is suitable for decorative, protective and other uses which can utilize the particular properties of the deposit. Developed by **United Chromium, Inc.**, 100 E. 42nd St., New York 17, N. Y.

For more details circle NED-924 F5 on enclosed inquiry slip

PLATING...

"200%" BETTER RESULTS OBTAINED WITH VAPOR BLASTING AS SURFACE PREPARATION



Cross Sections of Steel, Chrome Plated (Magnified 500 times). Note better Bond of Vapor Blasting section, right.

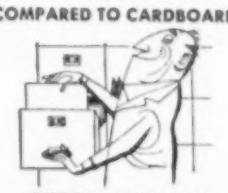
If you're preparing surfaces for chrome, nickel, copper, etc., plating, Parkerlubriting, or other phosphate coatings, electropolishing or any other surface finish, you need Vapor Blast Liquid Honing! . . . Provides "metallurgically clean" surfaces at high production speed . . . removes materials impossible by chemical cleaning . . . provides non-directional matte finish that improves plate adhesion, often eliminating grinding and buffing time. Vapor Blast Liquid Honing can pay for itself in many operations in your plant, too. Get the facts, or ask for a call from your nearby VB representative.

VAPOR V-B BLAST

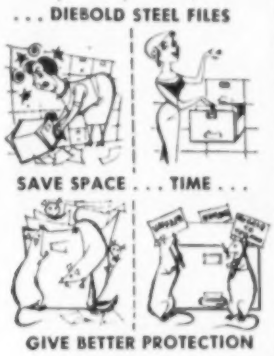
VAPOR BLAST MFG. CO.
3063 W. Atkinson Ave.
Milwaukee 16, Wisconsin

For more details circle NED-925 F5 on enclosed inquiry slip

COMPARED TO CARDBOARD



. . . DIEBOLD STEEL FILES



SAVE SPACE . . . TIME . . .

GIVE BETTER PROTECTION . . . AND COST THE SAME OR LESS

N-212-DI

DIEBOLD STEEL FILES

for fast easy reference
for lower cost storage

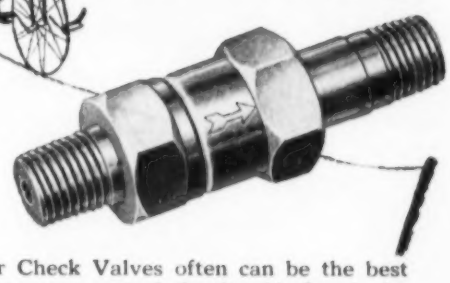
You can't afford cardboard . . . now that Safe-T-Stak steel storage files cost the same or less. Diebold steel files save up to 50% of space . . . eliminate erection and replacement costs . . . protect records from dust, dampness and vermin.

Diebold INCORPORATED
1008 Mulberry Rd., S. E.
Canton 2, Ohio

Write for information . . . new low prices!

For more details circle NED-926 F5 on enclosed inquiry slip

You get Positive control with Schrader® CHECK VALVES

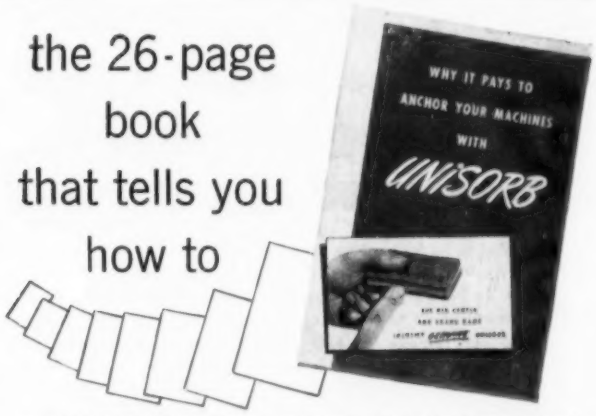


Schrader Check Valves often can be the best solution to your control circuits. Air flow is delivered in one direction only. Schrader Check Valves assure long trouble-free life with a minimum of maintenance. Available in two types with or without spring loading. For data on Schrader Check Valves and the whole Schrader line of air control products, send for the free Schrader catalog today.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue, Dept. AA-6, Brooklyn 38, N.Y.

For more details circle NED-927 F5 on enclosed inquiry slip

the 26-page book that tells you how to



- ANCHOR MACHINES and eliminate 60-85% of transmitted vibration
- ELIMINATE DRILLING of wood or concrete floors when installing machines
- SAVE TIME and money (up to 30%) on installation costs

For your copy of this valuable book, showing actual plant installations of UNISORB®, return the coupon today.

the FELTERS company
224 South Street, Boston 11, Mass.

Please send me a copy of FACTS ABOUT ANCHORING YOUR MACHINES WITH UNISORB, at no obligation to me.

Name.....Title.....
(Please print)
Company.....
Address.....
City.....Zone.....State.....
Return to: The Felters Co., 224 South St., Boston 11, Mass.

For more details circle NED-928 F5 on enclosed inquiry slip

PORTABLE MACHINE CUTS THREADING COSTS!

Fully illustrated booklet shows how the Oster No. 582 "Tom Thumb" Portable Pipe Machine reduces maintenance costs in large and small shops alike. Contains time studies, cutaway views, design features, specifications. Send for your copy today!

THE OSTER MANUFACTURING CO.
Main Office and Factory:
2066 E. 61st St., Cleveland 3, Ohio
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BUILDERS OF COST-REDUCING THREADING EQUIPMENT SINCE 1893

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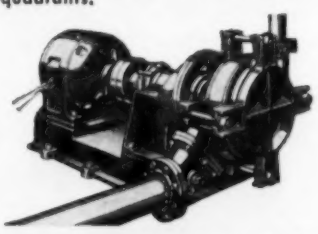
▲ For more details circle **NED-930 F5** on enclosed inquiry slip ▲

Only the MORRIS Type R SLURRY PUMP has these 4 features

1. Gland is under suction pressure only. This feature practically eliminates packing troubles.
2. For dismantling, you need remove only four bolts. No internal studs or bolts . . . no troublesome fits or joints.
3. You can remove impeller and liner without disturbing piping.
4. Shell interchangeable for right or left-hand rotation. Suction and discharge nozzles can be rotated to positions in any of four quadrants.

The New Type "R" Morris Slurry Pump handles caustic or acid mixtures containing abrasives or solids; also ore concentrates, tailings, slag, residue from filters and classifiers.



Write for specifications and operation data on pumps best suited to your particular needs. No charge or obligation.

MORRIS MACHINE WORKS
Baldwinsville, N. Y.
Sales Offices in Principal Cities

MORRIS CENTRIFUGAL PUMPS

▲ For more details circle **NED-931 F5** on enclosed inquiry slip ▲

New Literature & Catalogs

Aluminum in Process Industries

Eighty-page book "Process Industries Applications of Alcoa Aluminum" includes, first, descriptions of process applications of aluminum by industry and product; second, a directory of performance of aluminum with various chemicals; and third, latest information on designing aluminum processing equipment. Book includes over 100 photos and drawings. Available by request on company letterhead to Aluminum Co. of America, 761 Alcoa Bldg., Pittsburgh 19, Pa.

▲ For more details circle **NED-932 F5** on enclosed inquiry slip ▲

Flexible Metal Hose

Flexonics Corp.—Rex-Weld corrugated metal hose, Rex-Tube convoluted hose, Rex-Flex stainless steel flexible metal hose and numerous special purpose assemblies are covered in 12-page illustrated catalog 147. Coupling data are also included, as is a four-step guide for selection of the proper flexible metal hose.

▲ For more details circle **NED-933 F5** on enclosed inquiry slip ▲

Special Extruded Parts

Cleveland Cap Screw Co.—How specially designed headed and threaded parts are economically turned out in production quantities by single or double extrusion is described in 4-page illustrated folder "Specials . . . by Specialists." Various special parts are illustrated and procedures are related.

▲ For more details circle **NED-934 F5** on enclosed inquiry slip ▲

Vacuum Pumps & Compressors

Lammert & Mann Co.—All models of Lammert rotary vacuum pumps and compressors described in 8-page illustrated bulletin 510 can be used to furnish either high vacuum or pressure by correct arrangement of inlet and outlet pipes. Design details, applications, specifications are included.

▲ For more details circle **NED-935 F5** on enclosed inquiry slip ▲

Vibration Isolating Mountings

Lord Mfg. Co.—Data on Temproof mountings for vibration isolation, resistant to temperature range from −80 to 250° F, are found in 6-page illustrated bulletin 700. Applications include airborne electronic equipment and stationary industrial equipment. Specifications of all models are presented.

▲ For more details circle **NED-936 F5** on enclosed inquiry slip ▲

Compression Multiheaders

Hermetic Seal Products Co.—Technical data on Vac-Tite compression multiheaders of all-glass and all-metal construction is found in 16-page illustrated catalog 200. Solid pin terminals, tubular terminals and unit headers are available in plain, flanged and skirted multiheader body types.

▲ For more details circle **NED-937 F5** on enclosed inquiry slip ▲

Corrosionproofing Materials

Nukem Products Corp.—Mortar and hot pour types of corrosionproof cements, impervious membranes for steel shell and concrete base equipment, acid brick and acid-alkaliproof coatings are materials described in 24-page illustrated "Corrosion Engineers Manual". Use in tanks, floors, pits, sumps and sewer pipe is covered. Charts for properties, estimating and resistivity are included.

▲ For more details circle **NED-938 F5** on enclosed inquiry slip ▲

Waterproof Tapes

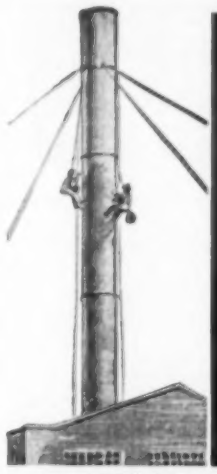
Kendall Co., Polyken Products Dept.—Controlled-strength waterproof tapes for many industrial applications are subject of illustrated folder P5-2. Uses include protection of insulating materials in refrigerators and freezers, guarding metal parts against condensation and sealing cartons to prevent moisture damage to contents. Properties of each of three types are given.

▲ For more details circle **NED-939 F5** on enclosed inquiry slip ▲

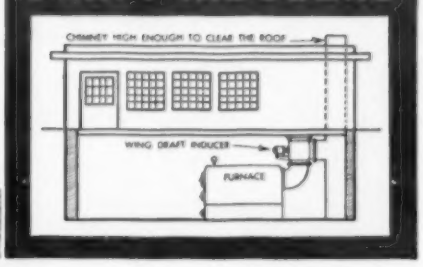
Autopositive Paper

Eastman Kodak Co.—Seven case histories found in brochure "Autopositive in Action" tell in detail of techniques employed by various firms in using Kodagraph autopositive paper for engineering drawing reproduction. Suggested uses include protecting original drawings, reclaiming old drawings, speeding revisions, combining standard designs and reproducing "unprintable" originals.

▲ For more details circle **NED-940 F5** on enclosed inquiry slip ▲



The next time your stack needs paint or repairs . . . think of WING DRAFT INDUCERS



Wing Draft Inducer Showing Axial Flow Fan and Barometric Damper (Optional)

Natural draft is costly. Steel stacks require periodic painting, repair and replacement. Brick chimneys need periodic pointing. A Wing Inducer and an inexpensive stub stack to clear the roof, is all you need to get positive, adequate draft at all times, regardless of wind or weather. Write today for bulletin.

L. J. Wing Mfg. Co. 165 Vreeland Mills Rd., Linden, N.J.

▲ For more details circle **NED-941 F5** on enclosed inquiry slip ▲

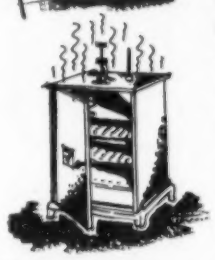
Until Sept. 30th! 10% ALLOWANCE for REPLACED EQUIPMENT

MORE THAN 10 YEARS OLD?

Automobiles 10 years old or more are usually *replaced* — because they MIGHT cause trouble just at the wrong time!

What About Your Constant Temperature Laboratory Equipment?

Age plus hard usage in an atmosphere that is usually corrosive, plus the factor of extreme heat, is normally conducive to accelerated deterioration. CAN YOU—WITH CONFIDENCE—FACE FUTURE REQUIREMENTS WITH YOUR OLD EQUIPMENT—THIS YEAR? —NEXT YEAR?



If Not, Take Advantage of This Timely Offer— The First of Its Kind to the Laboratory

Here's How You Get Your Allowance

1. By certifying on Precision certificate that you are REPLACING old constant temperature equipment.
2. You earn a 10% allowance on the price of the new item.
3. If your order is placed on or before September 30th.

WRITE FOR 10% ALLOWANCE CERTIFICATE AND LISTING OF 137 INDIVIDUAL ITEMS, TOGETHER WITH PRICES AND SAVINGS.

Precision Scientific Company

3755 WEST CORTLAND STREET • CHICAGO 47, ILLINOIS

▲ For more details circle **NED-942 F5** on enclosed inquiry slip ▲

RAKIT® QUICK MOUNTING BRACKETS

SIMPLIFIED SUPPORTING STRUCTURES

The new one-piece RAKIT Brackets have been specifically designed for quick and easy installation without nuts, bolts, or other fastening devices.

JUST A TWIST OF THE WRIST

There's no slipping or falling out.

These brackets are ideal for the support of items such as cable trough, instrument tubing trough, conduit, pipe, cable and many others.

The savings in assembly time and labor made possible by this one-piece RAKIT Bracket assure "better support for less cost." Write today for further information. Ask for bulletin 6D.

RAKIT CORPORATION
711 SOUTH 50th STREET • PHILADELPHIA 43, PA.

▲ For more details circle **NED-943 F5** on enclosed inquiry slip ▲

GRA-LAB

THE ALL PURPOSE INDUSTRIAL TIMER

- 3600 Settings
- Split-Second Accuracy
- Automatic Switching
- Giant 8" Dial
- Portable Models
- Panel Mount Models

Every Gra-Lab Universal Timer can be set for any desired time period within an unusually wide range of 3600 possible settings, (ie. sec. to 60 min., 1 min. to 60 hrs., etc.). At end of preset interval buzzer alarm sounds and external load is automatically switched on or off. Priced at $21.95 to $26.95.

ELECTRIC STOP CLOCKS—GRA-LAB Micro Timers with large 8" dials are available in 1/10 second or 1/1000 minute graduations for accurate measurements of elapsed time, in laboratory or production operations. Priced at $37.50.

Write direct for complete catalog to

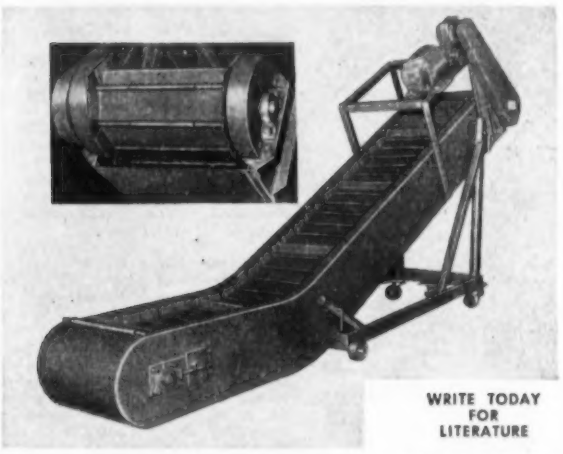
DIMCO-GRAY COMPANY 208 E. SIXTH STREET DAYTON 2, OHIO

▲ For more details circle NED-944 F5 on enclosed inquiry slip ▲

Sheehan's NEW

TUBULAR HINGE CONVEYOR

Move your chips and scrap on self lubricated bearings



WRITE TODAY FOR LITERATURE

Tubular hinge conveyors . . . manufactured in portable or stationary models . . . can rise straight up on an 18" radius. Various widths available to fit your job. Minimum loading height is 13" from floor. 2" side walls are part of the tubular hinge belt . . . which moves on self lubricated bearings . . . lubricating both the shaft and the track which the belt moves on. Cast iron chips are no problem.

Manufactured by

R. T. SHEEHAN COMPANY

8070 N. TERRITORIAL ROAD • PLYMOUTH, MICH.

▲ For more details circle NED-945 F5 on enclosed inquiry slip ▲

UNIVERSAL DRILL BUSHINGS OUTLAST THEM ALL!

Machined from high quality steel. Superfinish bores reduce wear. Blended radius helps prevent tool hang-up and breakage. 100% concentricity and hardness tests insure accuracy and uniform quality. Available in a complete range of standard sizes and lengths. Orders for special dimensions promptly handled. Write for complete information.

180-A

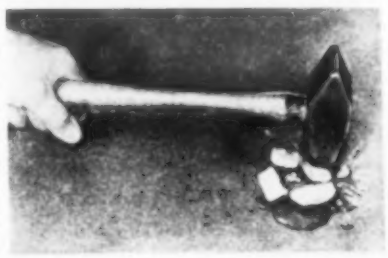
UNIVERSAL ENGINEERING CO.

FRANKENMUTH 5, MICHIGAN

▲ For more details circle NED-946 F5 on enclosed inquiry slip ▲

New Processes & Materials

TABLE TOP MATERIAL combines cement and asbestos fibers



Basically a mixture of Portland cement and asbestos fibers, Colorlith sheet material is intended as a bench and table top material for printing plants, machine shops, institutional kitchens and household furniture. It resists heat, impact and most active chemicals and is offered in charcoal gray and cameo brown colors. Sheets measure 48 x 96 in. by ¼, ⅜, ½, ¾, 1 or 1¼-in. thick. Colorlith is manufactured under enormous hydraulic pressure and will withstand unusual physical abuse. Modulus of rupture runs as high as 4500 psi for ¼-in. sheet. Metalworking tools can be used to drill, rout, mill and otherwise machine the sheets. Screw holding ability makes direct threading possible. Made by **Johns-Manville**, Box 60, New York 16, N. Y.

▲ For more details circle NED-947 F5 on enclosed inquiry slip ▲

PLASTIC BUILDING PANELS reinforced with nylon and Fiberglas

Nylon in the form of parallel strands has been combined with Fiberglas to provide rigidity and increased strength in Filon plastic building panels. Tests show that an 8-oz-per-sq-ft panel will support a load of over 200 lb per sq ft on a 4-ft unsupported span. This is double that required U.S. Army and Navy requirements. Impregnation and dispersion of pigments has also been improved for better color uniformity. Since panels are produced in continuous lengths, any length sheet for special applications, as well as all standard sizes are available. Filon is produced in 20 colors, in crinkled and smooth finishes and in 6 and 8-oz weights by **Plexolite Corp.**, Dept. NED, 2051 E. Maple Ave., El Segundo, Calif.

▲ For more details circle NED-948 F5 on enclosed inquiry slip ▲

THIN TITANIUM FOIL minimum thickness is 0.0008-in.

Titanium will soon be rolled to a reported unprecedented thinness of 0.005-in. This foil is superior in strength to many metals, including steel and aluminum, and weighs only 56 per cent as heavy as alloy steel. Titanium foils in commercial pure T1-75A and RC-55 alloys are now produced with mill limits of 0.0008-in. minimum thickness, 7¾-in. maximum width and 3/32-in. minimum width by **American Silver Co.**, Dept. NED, 36-07 Prince St., Flushing 54, N. Y.

▲ For more details circle NED-949 F5 on enclosed inquiry slip ▲

FIRE RETARDANT PAINT one coat offers fire protection

Application of one-coat Albi fire retardant paint provides fire protection that meets Underwriters' Laboratories standards. It can be applied by ordinary brush,

roller or spray methods to such surfaces as wood, steel, acoustical tile or fiberboard. When fire strikes the coated surface, the paint puffs into a thick cellular mat that not only resists flame but insulates the surface from the passage of the intense heat. When the blaze is extinguished, the black "mat" is easily scraped off, revealing the undamaged surface ready for repainting. Variety of paint colors is available. Made by **Albi Mfg. Co.**, Dept. DEN, 98 E. Main St., Rockville, Conn.

▲ For more details circle NED-950 F5 on enclosed inquiry slip ▲

INFORMATION ON B&W SEAMLESS STAINLESS TUBING and PIPE

. . . is given in new B&W Technical Bulletin 355. Covers properties of most-used B&W Stainless Croloys for pressure and mechanical uses. *For Pressure Applications:* Data on corrosion resistance, high and low temperature strength, non-contamination, service life. *For Mechanical Applications:* Data on fabrication and workability, machining, bending, welding. *Send for your copy of Technical Bulletin 355.* TA-5032 (LP)

THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION
Beaver Falls, Pa., Milwaukee, Wisc.: Seamless Tubing, Welded Stainless Steel Tubing
Alliance, Ohio: Welded Carbon Steel Tubing

▲ For more details circle NED-951 F5 on enclosed inquiry slip ▲

How Engineers Become Design Engineers at Lockheed in California

Engineers find the step up to Aircraft Design an interesting, rewarding experience in Lockheed's Training Program for Design Engineers.

It's a program adapted to the individual. It adapts you to Lockheed – and Lockheed to you. For the program not only trains you for Aircraft Design, it enables Lockheed to assess your special abilities, assign you to the project best suited to your talents.

Aircraft engineering experience is not necessary to qualify. Lockheed is interested in your knowledge of engineering principles, your aptitude, your experience in other engineering fields.

In the program you receive extensive orientation. When necessary, you attend Lockheed engineering classes. You engage in on-the-job training. You learn to work with closer tolerances. You become more weight-conscious. You learn that fresh thinking, new ideas are welcomed and rewarded.

Your program may take three weeks – or three months. It depends on your experience and assignment.

After the Training Program is completed you join the most diversified Design effort in the history of Lockheed.

46 major projects are in motion – including turbo-prop and turbo-jet transports, vertical rising aircraft, jet trainers, extremely high-speed fighters, bombers, nuclear applications to aircraft.

In career terms this diversification means more scope for your ability; more opportunity for promotion; more job security with so many projects in progress.

You are invited to write for more information on Lockheed's Training Program for Design Engineers. Address: Dept. H-20-6, E. W. Des Lauriers, Design Engineer Training Program, Lockheed Aircraft Corporation, Burbank, California.

Now in effect: Increased salary rates • Increased overtime scales • Increased employee benefits • A travel and moving expense program that enables you and your family to move to Lockheed in California at virtually no expense or trouble.

Lockheed AIRCRAFT CORPORATION

CALIFORNIA DIVISION, BURBANK California

▲ For more details circle NED-952 F5 on enclosed inquiry slip ▲

There's a Master Truck for Every Aisle Width!

You decide the most practical aisle width . . . then select the L-S Master Truck to match . . . there's one for every aisle. (Aisle widths shown are for 40" long pallets.)

Lewis-Shepard offers you every type of truck made (two-wheelers to huge fork lifts) . . . the only complete line on the market.

Write for an L-S "Space Wheel" . . . tells you aisles required for L-S Trucks and probable savings. And, ask for literature on the Master Trucks illustrated.

LEWIS-SHEPARD

The Master Line 176 WALNUT ST., WATERTOWN 72, MASS.

▲ For more details circle NED-955 F5 on enclosed inquiry slip ▲

NEED QUICK ACTION?

CONTACT CHELSEA

ALL-YEAR VENTILATION · MAN COOLING · TEMPERATURE EQUALIZATION · WINTER AIR CIRCULATION · FUME & GAS CONTROL · SUMMER COOLING · SPOT VENTILATION · BOILER MAINTENANCE · STEAM CONTROL · PAINT SPRAY CONTROL · DUST CONTROL · PAINT — INK DRYING · REMOVING ODORS

PLANNED SYSTEMS BY EXPERT ENGINEERS

If warmer weather is aggravating these conditions in your plant — contact CHELSEA! . . . Whether you need a single fan or a complete system, qualified Chelsea representatives will quickly give you sound advice for a satisfactory solution to any cooling or ventilating problem.

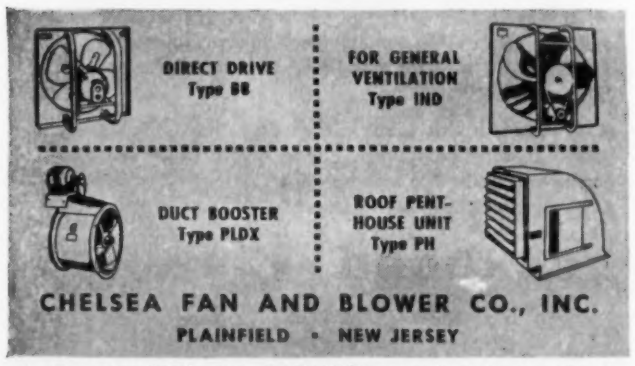
Call our representatives for technical assistance on specific problems, or let them make a complete survey of your plant—at no cost or obligation.

Every Chelsea fan has a PFMA Certified Rating and is Guaranteed

Write for Bulletin #600-55

Chelsea

INDUSTRIAL FANS



CHELSEA FAN AND BLOWER CO., INC.
PLAINFIELD • NEW JERSEY

▲ For more details circle NED-956 F5 on enclosed inquiry slip ▲

New Literature & Catalogs

Liquid Processing Equipment

Alsop Engineering Corp.—Photos, diagrams and comprehensive information on line of stainless steel liquid processing equipment, including filters, fixed-side and top-entering agitators and transfer pumps, are contained in 32-page catalog G-255. Each product is treated separately, with features described and application and performance data being included.

▲ For more details circle **NED-957 F5** on enclosed inquiry slip ▲

Aluminum Nameplates

C & H Supply Co.—"Branded for Life" is title of illustrated 4-page bulletin which explains how Metal-Cal anodize etched aluminum nameplates can be used for quick, economical trademarking, serial numbering, service labeling, catalog and parts numbering, and dial and gage marking. These durable metal labels have pressure-sensitive adhesive backing and adhere securely to any smooth, cohesive surface. They are available in lustrous metallic or matte finish in wide variety of colors and aluminum.

▲ For more details circle **NED-958 F5** on enclosed inquiry slip ▲

Magnesium Fabrication Facilities

Brooks & Perkins, Inc.—"The Magnesium Industry's Broadest Scope of Services in Fabricating, Assembling and Finishing" is an 8-page brochure which shows the facilities and services of this company for the working of magnesium and titanium. Also shown are commercial products produced.

▲ For more details circle **NED-959 F5** on enclosed inquiry slip ▲

Manufacturing Facilities

National Welding & Mfg. Co.—Services, specialties, facilities and mechanical talents of its employees are outlined in the 12 pages of this brochure. Photos with short descriptions cover sheet and plate fabrication, welding, angle rolling, bending, punching, machining, shearing and flame cutting.

▲ For more details circle **NED-960 F5** on enclosed inquiry slip ▲

Stainless Sinks, Trays, Accessories

P & H Sales Corp.—Line of custom-built stainless steel sinks, tanks, trays and accessories is featured in 16-page illustrated catalog SE55. Among photographic, laboratory and chemical processing equipment covered are various types of sinks, thermostatic water mixer, trays for developing, fixing and washing, film processors, cut film tanks, storage tanks for storing, mixing and measuring chemicals and beakers, graduates and buckets.

▲ For more details circle **NED-961 F5** on enclosed inquiry slip ▲

Hydraulic Pumps

Viking Pump Co.—Descriptive data with full specifications are provided in 8-page plastic bound brochure section I on "Viking Rotary Pumps." Piece effectively explains the positive displacement principle of operation for these hydraulic pumps available in from 5 to 200-gpm ratings. Performance graphs on six models are featured.

▲ For more details circle **NED-962 F5** on enclosed inquiry slip ▲

Floor Care Equipment & Materials

Multi-Clean Products, Inc.—"Here's Everything You Need for Better Floor Care" is an 8-page folder which contains data on floor and scrubbing machines, industrial vacuum cleaners, rug and upholstery cleaning equipment, furnace cleaning units, sanding machines, floor cleaners, rug and upholstery shampoos, floor sealers, preservers and waxes. Chart describes 24 floor liquids for various types of flooring and floor coverings.

▲ For more details circle **NED-963 F5** on enclosed inquiry slip ▲

Weighing & Force Measuring

Baldwin-Lima-Hamilton Corp.—Use of Baldwin SR-4 load cells and load beams for electrical measurement of weight and force is detailed in 20-page illustrated bulletin 4301. Principles of measurement, specifications of load sensitive devices, available instrumentation and typical applications are covered.

▲ For more details circle **NED-964 F5** on enclosed inquiry slip ▲

Industrial Hardware

Yale & Towne Mfg. Co., Lock & Hardware Div.—Among products described and illustrated in this industrial catalog are locks and hardware for chests, prefabricated metal and wood doors, vending machines and other products. Technical data, federal specifications and installation and use data are included in contents.

▲ For more details circle **NED-965 F5** on enclosed inquiry slip ▲

factory tests prove it!

power methods of lubrication are 63% faster

Alemite cuts costs!

all the way from barrel to bearing . . . in maintenance . . . repairs . . . down-time . . .

YOU SAVE STEP BY STEP!

Alemite Plan "C" is a simple, cost-saving combination of Alemite Power Transfer Pumps and Power Guns. Transfer Pump fits right into drum of lubricant—keeps it sealed against contamination — fills a big Power Gun in seconds. Gun is then ready to take all the advantages of power lubrication to *any* machine — *anywhere* in your plant. Services hundreds of bearings without refilling! Your Alemite representative will show you the *exact* combination to save money in *your* plant.

This is just one of the money-saving plans outlined. Send for this valuable booklet today!

Write for FREE Booklet —"5 Plans for Better Plant Lubrication"

ALEMITE

REG. U. S. PAT. OFF.

Alemite, Dept. L-65, 1850 Diversey Parkway, Chicago 14, Ill.

▲ For more details circle NED-966 F5 on enclosed inquiry slip ▲

Wayne Compressors

The Power Behind The Tool

. . . that always delivers guaranteed full-rated output

When air pressure goes down on the "tool line" production slumps. You can be sure of positive air power for every tool with a Wayne Production-Booster Air Compressor.

Every Wayne Air Compressor is sold on the basis of known efficiency in the terms of useable air output—pre-tested and guaranteed. Wayne Compressors are checked for volumetric efficiency, performance and operating tolerances. Inspection standards are high and units must measure up to rigid requirements in every case. Every working part has been designed for minimum maintenance and low operating costs. That's why Wayne Compressors have built a reputation from coast to coast for saving their cost in less power used . . . in more production turned out.

To keep the power behind your tools always up to required pressure get a Wayne Production-Booster Compressor. Sizes from 1 HP up in single and two stage models. Write today for the booklet that will help you boost your production.

Wayne Industrial Products

THE WAYNE PUMP CO.
Industrial Division • FORT WAYNE, INDIANA
Salisbury, Maryland • Toronto, Canada

▲ For more details circle NED-967 F5 on enclosed inquiry slip ▲

The ROTARY UNION

Reg. U. S. Pat. Off.

Wherever Rotating Connections are Required

The ROTARY UNION is patented in the USA and Foreign Countries.

And it means the finest, longest lasting rotating joint in the world . . . the high speed, high pressure, positive mechanical seal which is self-aligning and self-adjusting. The ROTARY UNION will save you money on rubber and plastic equipment, flake rolls, grain dryers, ball mills, calenders, printing and coating machinery, and on any other revolving equipment which must be heated or cooled . . . so be sure to specify the ROTARY UNION.

Write for Bulletin 700D

Permits Field Repair

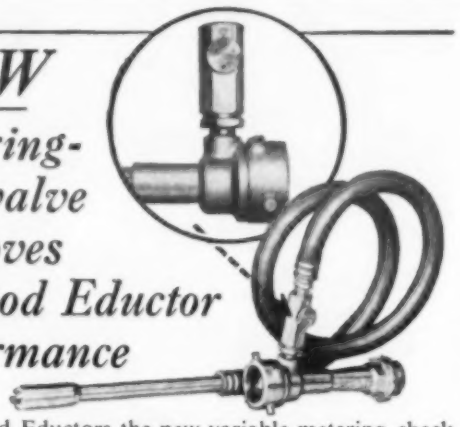
"Where *Good Connections* Count"®

Baltimore · Camden, N. J. · Cleveland · New York · Chicago · Los Angeles · Providence · Montreal · Toronto

PERFECTING SERVICE CO.
(Home Office and Factory)
332 Atando Ave. Charlotte, N. C.

▲ For more details circle NED-968 F5 on enclosed inquiry slip ▲

NEW metering-check valve improves Rockwood Eductor performance



In Rockwood Eductors the new variable metering-check valve adds two important advantages to automatic liquid-proportioning. The calibrated dial permits varying the mixture to include from 1% to 6% of the introduced liquid. And the ball check valve prevents the basic liquid from flowing back into the additive if the nozzle is shut off or stoppage occurs in the line.

Connected into fire hose lines, Rockwood Eductors introduce Rockwood WET, Regular Strength FOAM or Double Strength FOAM — *automatically*, in the correct proportions determined by the dial setting on the metering-check valve.

They have many other uses. Perhaps Rockwood Eductors are the answer to your own liquid-proportioning problems. Why not consult Rockwood engineers?

ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

Portable Fire Protection Division

2021 HARLOW STREET, WORCESTER 5, MASSACHUSETTS

▲ For more details circle **NED-969 F5** on enclosed inquiry slip ▲

EATON-RELIANCE SPRINGTITES® and SEMS Fasten More Efficiently!

EASY TO USE
•
SPEED ASSEMBLY
•
ELIMINATE WASHER LOSS

SEND TODAY FOR FREE ENGINEERING BULLETIN S-49

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ST. LOUIS • SAN FRANCISCO • MONTREAL

509 Charles Avenue, Massillon, Ohio

▲ For more details circle **NED-970 F5** on enclosed inquiry slip ▲

"This multiple drill head has increased our torch cone end production by about 600%."

Drilling 6 holes 1⅞" deep— No. 45 Drill, 28 strokes in 1 min. 10 sec.

When this MULTI-DRILL went into operation with a seven-station full automatic step drilling machine, welding torch cone end production at the Victor Equipment Co., manufacturers of gas welding and flame cutting equipment, went up "about 600%."

Why not see how your production can be increased with a MULTI-DRILL—the production drilling head designed for accurate high speed drilling? Available with 2 to 8 spindles; quickly and easily adjusted to any hole pattern on or within a 9" circle; ½" min. center distances. Drill sizes 1/32" to ⅜". *Special adaptations available*

Write for details and name of your nearest Distributor

COMMANDER MFG. CO.
4220 W. Kinzie Street • Chicago 24

Product of *Commander* — Builder of the *Commander Tapper*

▲ For more details circle **NED-971 F5** on enclosed inquiry slip ▲

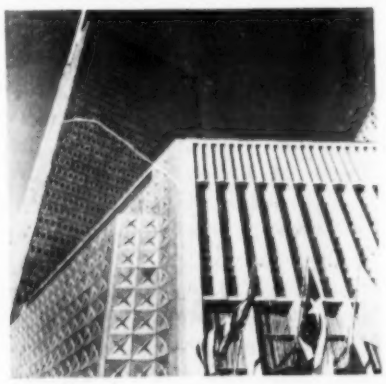
New Processes & Materials

ROOF COATING
aluminum content reflects sun's heat

Flakes of bright metallic aluminum contained in Siliconed Asbestolite roof coating is said to effect a considerable reduction in underroof heat by reflecting approximately 71 per cent of the sun's heat. Coating also contains long-strand asbestos, waterproofing oils and silicones. It has cold-insulating properties and, by holding roof temperatures more nearly constant with those of building interiors, it reduces condensation. Application can be on concrete block walls as well as on roofs without heating or thinning prior to spraying or brushing. It resists chemical vapors, gases and fumes, is not affected by roof expansion and contraction, and does not crack or blister. Made by **Monroe Co.**, Dept. M-1, 10703 Quebec Ave., Cleveland 6, O.

▲ For more details circle **NED-972 F5** on enclosed inquiry slip ▲

CAULKING COMPOUND
made of synthetic rubber for varied sealing, filling and caulking uses

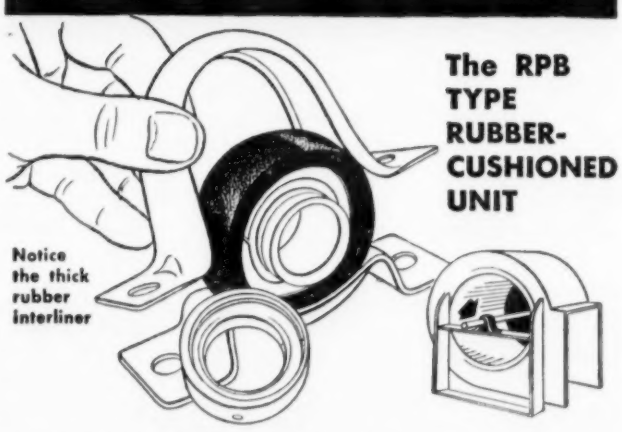


Del synthetic rubber caulking compound can be applied without shrinkage and sets to a resilient rubber with good adhesion to metal and glass. Made of Thiokol liquid polymer, it withstands temperature extremes of −65 to 250° F, excessive vibration, strong sunlight, weathering and aging. Application is by knife, trowel or caulking gun. Material can be sandpapered or cut with sharp tools, can be coated over with paints or protective coatings and resists gasoline, oils, dilute acids and alkalies.

It will adhere to metal, masonry, wood, glass and other materials. Uses include sealing around pipes coming through walls, tanks or equipment; filling cracks in concrete floors, caulking joints in tanks; caulking window sash; and sealing transformers, pot heads, motors and switchgear. Photo shows building on which 3000 windows were caulked with the material. Made by **David E. Long Corp.**, Dept. CC, 220 E. 42nd St., New York 17, N. Y.

▲ For more details circle **NED-973 F5** on enclosed inquiry slip ▲

Announcing A NEW SUPER-QUIET BALL BEARING PILLOW BLOCK



The RPB TYPE RUBBER-CUSHIONED UNIT

Manufacturers of Air Conditioning Equipment . . . and any equipment where noise elimination is desirable . . . here's the answer to your problem! Now, Fafnir offers a low cost, extra compact ball bearing pillow block with a thick electric current-conducting rubber interliner. Write for complete details. The Fafnir Bearing Company, New Britain, Conn.

OTHER FEATURES
- Two-piece, separable pressed steel housing
- Wide Inner Ring Type Precision Ball Bearing with Self-Locking Collar
- Ball Bearing Races and Balls finished for quietest operation

FAFNIR BALL BEARINGS
Most Complete Line in America

▲ For more details circle **NED-974 F5** on enclosed inquiry slip ▲

Time to Discard **OLD-FASHIONED WAYS**

Jacks . . props . . shores . . horses . . why fool with these obsolete methods of handling reels? DO IT THE MODERN, EFFICIENT WAY! Reel or unreel wire, cable, rope with

ROLL-A-REEL

Simple, strong, easily handled stand for your reels to save time and labor. Adjustable slots for wide variety of reel sizes.

Style A: 2,000 lbs. cap. 37.50
Style B: 4,000 lbs. cap. 75.00
F.O.B. Cincinnati

WRITE TODAY FOR DETAILS

ROLL-A-REEL
1100 SYCAMORE AT CENTRAL PARKWAY
CINCINNATI 2, OHIO

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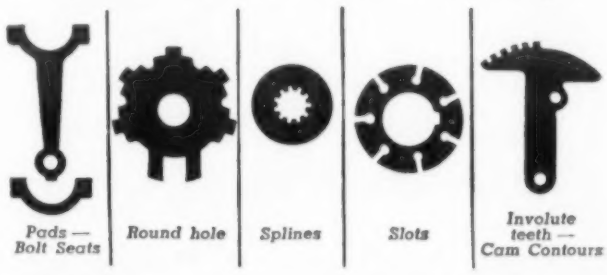
Whatever the job . . .
BROACH IT the American way



Whether or not your application for broaching is one of those shown here — and regardless of how simple or complex it may be — American will furnish the broaching equipment to meet your requirements for output, tolerance and finish. American builds all types of broaches, fixtures and broaching machines — backs up its products with a strong service organization to insure that they do the job right.

Send a part print or sample to Dept. M for a free estimate . . . or write for Catalog 450.

American BROACH & MACHINE CO.
A DIVISION OF SUNDSTRAND MACHINE TOOL CO.
ANN ARBOR, MICHIGAN

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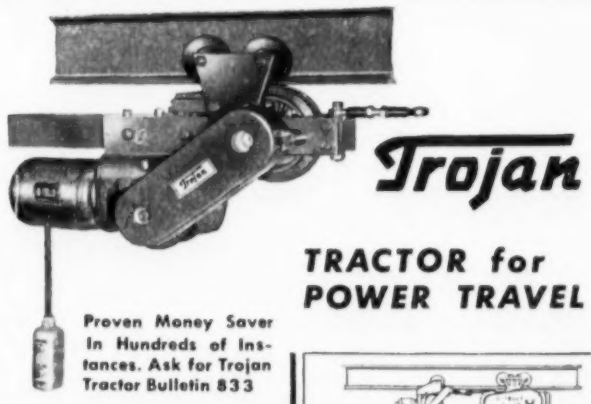
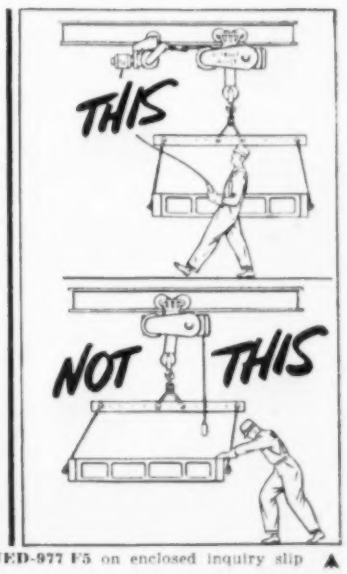


Trojan

TRACTOR for POWER TRAVEL

Proven Money Saver In Hundreds of Instances. Ask for Trojan Tractor Bulletin 833

Make your hand pushed hoists and cranes power traveled. Eliminate slow pulling and pushing drudgery. Speed up handling, save time, increase production, reduce costs. Simply attach a Trojan Tractor; inexpensive, quick delivery. Order one today.



DETROIT HOIST & MACHINE CO.
Designers and Manufacturers of Hoists and Cranes since 1905
8214 Morrow St., Detroit 11, Mich.

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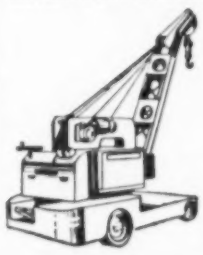
every plant needs a mobile

ELPAR CRANE

For handling and stacking heavy odd-shaped loads over unfixed routes, few other material handling devices can match the versatility of ELPAR mobile cranes. They are speedy, maneuverable and work well in close quarters. Also valuable on maintenance work and carloading... Electric or gas-electric powered, 2,000 to 10,000 lbs. capacity, telescoping booms if desired.



Write for Folder

THE ELWELL-PARKER ELECTRIC CO.
4094 St. Clair Avenue • Cleveland 3, Ohio

▲ For more details circle NED-978 F5 on enclosed inquiry slip ▲

NEW! 'Sexauer' Monel Self-Locking bibb screw – 10 sizes do the work of 37!

NEW! 'Sexauer' Easy-Tite faucet washer with Fiberglas reinforcing

This nylon plug locks the screw *automatically!*

NEW! Amazing, patented screw and washer combination cuts faucet washer replacements 75%

—with each leak eliminated, you reduce water and fuel bills up to $28.80 quarterly

Most faucet washer failures are caused by wrong length screws. 'Sexauer' Self-Locking screws* and Easy-Tite washers* – used together – cut costly washer replacements 75%! You save up to $28.80 quarterly in water and fuel alone with each leak stopped. Here's how...

A screw *too short* for the tapping distorts and splits the washer when tightened; the washer works loose, is torn to shreds. If *too long*, it can't grip the washer; this ruins the washer and causes hammering in the water line.

Simplifies fitting problem—cuts installation costs

'Sexauer' Self-Locking screws eliminate the problem of misfit screws. They lock *automatically* at the required depth as the nylon plug is compressed in the faucet thread. The washer is not distorted, is held firmly.

You can re-use Self-Locking bibb screws repeatedly. Made of Monel, they resist corrosion, never rust; heads won't twist off, screw driver will not distort the slot.

Self-Locking screws save time spent in fitting the proper length – 10 sizes do the work of 37! Used with new, Fiberglas-reinforced 'Sexauer' Easy-Tites, they cut washer replacements 75%, fixtures last longer. Easy-Tites resist closing squeeze and excessively hot water, outlast ordinary washers 6 to 1!

Water and fuel savings

One dripping faucet wastes 8,000 gals. of water yearly. A pinhole size stream increases waste to 8,000 gals. in a *single month!* Here is what you save *quarterly* in stopping just *one* pinhole leak on a hot water faucet:

Fuel Saving		Water Saving	Total Saving
Oil (198 gals.)	$22.77	$6.03	$28.80
Coal (2,469 lbs.)	22.22	6.03	28.25
Gas (21,103 cu. ft.)	21.20	6.03	27.23

Save water, fuel and labor costs; conserve costly fixtures by cutting washer replacements 75%! Use *new* 'Sexauer' Self-Locking screws and Easy-Tite faucet washers. *You save every time you do!*

WRITE FOR CATALOG. New 'Sexauer' Self-Locking screws and Easy-Tite washers are just part of the line of over 3,000 'Sexauer' Triple-Wear plumbing repair parts and patented precision tools. Send for our new, 126-page Catalog H. *Write today!*

*Reg. U. S. Pat. Off

J. A. SEXAUER MANUFACTURING CO., INC. Dept. AU-65
2503-05 Third Avenue, New York 51, N. Y.

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

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New Literature & Catalogs

Vulcanized Fiber

Continental-Diamond Fibre Co.—Technical information and specification tables, compiled for assistance to designers, are contained in 12-page illustrated catalog DVF-55 on vulcanized fiber sheet, tube, rod and fabricated specialties. Physical, electrical and chemical properties are given and useful data tables are included.

▲ For more details circle NED-980 F5 on enclosed inquiry slip ▲

Carbide Tools & Blanks

Adamas Carbide Corp.—"Throw-away" carbide insert blanks, each size made in two thicknesses, are featured in 16-page price and specification book 335. Also covered in detail are complete lines of standard carbide tools and blanks.

▲ For more details circle NED-981 F5 on enclosed inquiry slip ▲

Heat Treating Furnaces

Leeds & Northrup Co.—"Homocarb Method with Microcarb Atmosphere Control for Heat Treatment of Steel" is a 20-page illustrated bulletin, identified as TD4-620(1), which makes use of installation photos and case histories. It tells how furnaces with Microcarb control are being used for case carburizing, carbon restoration, homogeneous carburizing and hardening of steel products. Descriptions and specifications of equipment are included.

▲ For more details circle NED-982 F5 on enclosed inquiry slip ▲

Wire Markers

North Shore Nameplate Inc.—Speedy-Marx and Speedy-Marx Hi-Temp wire markers, made of a pressure-sensitive tape which resists heat, cold, humidity and vibration, are subject of 8-page catalog. Hi-Temp markers resist heat up to 400° F. Standard and to-order codes and sizes are described.

▲ For more details circle NED-983 F5 on enclosed inquiry slip ▲

Thermostat Metal

Metals & Controls Corp., General Plate Div.—Information on selection of thermal elements and their design is found in the Truflex thermostat metal catalog. Manufacture of the bi-metal products is outlined. Tables give major mechanical and physical constants for 40 different types of thermostatic metals.

▲ For more details circle NED-984 F5 on enclosed inquiry slip ▲

Production Facilities

New Process Gear Corp.—Facilities for precision metalworking production are detailed in 24-page booklet "Geared for Research, Design and Production." Equipment of firm's six plants is listed and engineering services available are described.

▲ For more details circle NED-985 F5 on enclosed inquiry slip ▲

Precision Spindles

Standard Electrical Tool Co.—Line of Super Precision spindles for grinding, boring, drilling, milling, routing and other kinds of work heads is described in illustrated catalog No. 20. Details on machine tool attachments, including slides, feeds, traverses and tables are included. Custom-built spindles are illustrated.

▲ For more details circle NED-986 F5 on enclosed inquiry slip ▲

Hobs, Cutters & Broaches

Brad Foote Gear Works, Inc.—Hobs, cutters and broaches assembled by this company in producing custom-built and production gears are listed in 56-page booklet, revised to April 1955. Stock listed enables company to do almost any gear cutting job without additional tools.

▲ For more details circle NED-987 F5 on enclosed inquiry slip ▲

Abrasive Belt Machining

Engelberg Huller Co.—Five types of abrasive belt machining operations are explained in 24-page illustrated catalog "Abrasive Belt Machining." Line of abrasive belt machines, acquired from Porter Cable Machine Co. and expanded, is described in detail.

▲ For more details circle NED-988 F5 on enclosed inquiry slip ▲

Steel Storage Files

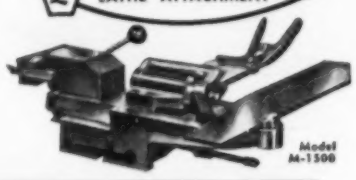
Diebold, Inc., Systems Div.—Space saving method of storing inactive records in Safe-T-Stak steel storage files is described in 4-page illustrated catalog AL-2804. Seven of the most popular file drawers available are shown and each size unit is described. Recommendations for records to be housed in each unit are given.

▲ For more details circle NED-989 F5 on enclosed inquiry slip ▲

Precision DUPLICATING on ANY Engine or Turret LATHE

Lehigh TRACER-TOOL
PROFILE-TRACING LATHE ATTACHMENT

Time and money saver for short or production runs —on any metal



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See our catalog and engineering sheets illustrating unlimited variety of turning, facing, boring, grinding and Bullard operations performed quickly and accurately with this low cost tool. No complicated hydraulic or electronic controls. Requires no permanent lathe alterations. Uses simple, easily made templates. Models to fit lathes 9" to 24" and larger.

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Mfrs. of LEHIGH Air Valves, Air Cylinders, Air Hoists, Air Motors
West Coast Distributor: CAMPBELL CONTOUR ATTACHMENT CO.
1320 W. Esther Street, Long Beach, Cal.

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Foot operated locking mechanism holds workbench in position...assures stable working surface.

For **ON THE SPOT**
• MAINTENANCE • ASSEMBLY • REPAIR

Mobile workbench can be moved to work location by one man. Cabinet, three shelves, drawer, two doors can be locked. Designed for hard continuous service, this welded all-steel unit is fabricated of 1/8 and 3/16-inch steel plate. It is capable of supporting up to 2,000 pounds safely. Heavy-duty roller bearing casters with hard rubber or phenolic resin wheels are furnished. The "Roll-A-Bench" weighs 325 pounds and is 34-inches high, 41-inches long and 26-inches wide. Table-top is 24 x 36 inches.

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the Overbeke-Kain company
20979 Aurora Road • Bedford, Ohio
6309-OK

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The new Eversharp Injector RAZOR
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1	51	101	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051	1101	1151
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CONNECTORS

A Complete Line
of Quality Grounding Types to Meet
CODE REQUIREMENTS
2 Wire, 3 Pole • 3 Wire, 4 Pole

Meet code requirements and today's increased demand for grounding type units with R&S Ever-Lok plugs, receptacles and cord connectors.

Outstanding advantage of Ever-Lok is an automatic locking feature that grips fast and holds forever. No tug or pull will work it loose—yet it separates instantly with a finger-tip twist of the powerful bayonet type lock. Write for descriptive literature, EL 15 on all types of R&S Ever-Lok. E2

RUSSELL & STOLL COMPANY, INC. • 125 BARCLAY STREET, NEW YORK 7, N.Y.

RUSSELL & STOLL
PRECISION-BUILT ELECTRICAL EQUIPMENT—SINCE 1902

▲ For more details circle NED-993 F5 on enclosed inquiry slip ▲

Get the Facts
on new efficiency and economy
in small parts handling with... NESTIER

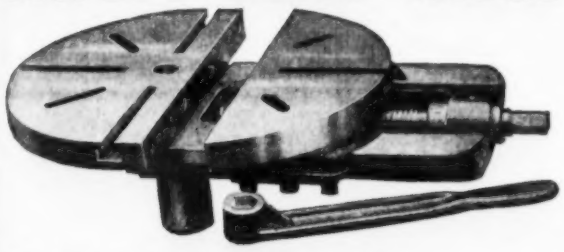
New NesTier Catalog DN-1000 contains the answer to small parts handling problems of all types... gives a comprehensive picture of the savings and increased efficiency possible when you handle parts and products the NesTier way. Standard NesTier line of boxes and baskets ... as well as newly-developed equipment that quickly converts NesTier units into an integrated materials handling system ... is illustrated and described.

WRITE TODAY FOR YOUR COPY OF CATALOG DN-1000.

NESTIER ... First in small parts handling
The Chas. Wm. Doepke Mfg. Co., Inc.
8884 Blue Ash Road • Rossmoyne, Ohio

▲ For more details circle NED-994 F5 on enclosed inquiry slip ▲

Try the MODERN
SAFETY DRILL TABLE



For Faster, SAFER Work in
Your Maintenance Department

Combines a drill table, a vise, a set of parallels and V block. No more lost fingers from hand held jobs that slip. No more 30 minute set-ups for a 1 minute drilling operation. Made specifications on all models. Covers MONEY BACK GUARANTEE and 30 DAY FREE TRIAL OFFER.

In 6 sizes from 8" to 28" dia. We guarantee each Safety Drill Table will save its cost on labor alone in 6 months, to say nothing of plant down time when vital maintenance is delayed even a few minutes.

FREE TRIAL OFFER

WRITE FOR FREE FOLDER

Shows many typical set-ups and use on radial drills. Complete

MODERN MACHINE TOOL CO.
Jackson, Michigan

▲ For more details circle NED-995 F5 on enclosed inquiry slip ▲

New Processes & Materials

PURE MERCURY
metal resists oxidation

Mercury is offered with a new standard of purity according to reports of this company. This mercury presents a mirror-like surface brilliance with no observable oxidation. Metal is also said to be almost completely free of any meniscus. These features adapt the mercury for use in precision instruments, computers and automatic devices. Offered by **Metalsalts Corp.**, 190 Wagaraw Rd., Hawthorne, N. J.

▲ For more details circle NED-996 F5 on enclosed inquiry slip ▲

PLASTIC COATING
forms glossy surface on concrete

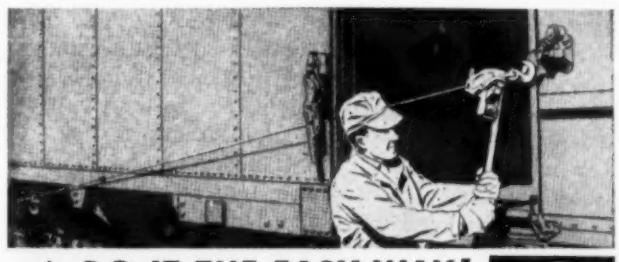
Durable, waterproof, chip and weather resistant Metaseal plastic coating is a 100 per cent polyester plastic with added pigments for color. It forms a permanent glossy surface on such concrete surfaces as floors, swimming pools and walls. Finish requires no primer and spreads a coating twice as thick as ordinary paint. It hardens by chemical action to form a solid surface which is waterproof, yet breathes. Moisture trapped under it will pass through as a vapor, preventing flaking and peeling. Applied by roller spreading, coating is available in various colors, clear and black. Made by **American Metaseal Corp.**, 607 65th St., West New York, N. J.

▲ For more details circle NED-997 F5 on enclosed inquiry slip ▲

PIPE INSULATION
prevents dripping or freezing

Packaged in clear plastic bag, this pipe insulation kit provides means for protecting pipes from freezing in cold weather and from dripping in warm weather. Kit contains 25 ft of 3-in. wide Fiberglas and two rolls of waterproof tape. This is enough to cover 15 ft of ¾-in. pipe or 20 ft of ⅜-in. pipe or tubing. It is applied simply by spiraling the Fiberglas blanket around the pipe and wrapping with the tape. Price is $1. Made by **Smith-Gates Corp.**, Dept. A, Plainville, Conn.

▲ For more details circle NED-998 F5 on enclosed inquiry slip ▲



DO IT THE EASY WAY!
With The NEW
Lightweight
LUG-ALL
CAR DOOR PULLER

Every shipper using boxcars needs the new Lug-All Car Door Puller. One man opens boxcar doors in a jiffy. Easy to carry, easy to use. Extra long cable—enough to open 50' boxcars from end of car. SAFER—has 3,000 lb. pull when double rigged. Tested to 100% overload. Safety Handle will bend if Puller is dangerously over-loaded. Eye bolt and clevis hook combination at end of frame permits right angle anchorage. Write for more information TODAY.

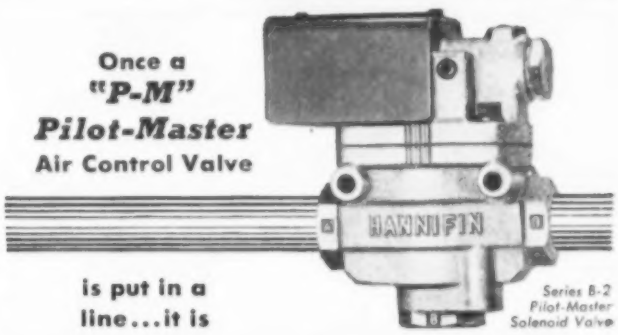
MODEL HDR-27 (Reach 27 ft. weight 12½ lbs.) $43.75 F.O.B.
MODEL HDR-12 (Reach 12 ft. weight 11 lbs.) $37.75 F.O.B.

Manufactured and guaranteed for one year by the makers of the famous Lug-All Winch Hoist.

THE LUG-ALL COMPANY
Haverford 6, Penna. Phone Midway 2-0164

▲ For more details circle NED-999 F5 on enclosed inquiry slip ▲

Once a "P-M" Pilot-Master Air Control Valve is put in a line...it is



Series B-2 Pilot-Master Solenoid Valve

never removed!

That's right: You use a pipe wrench only once...then never touch the piping again. To renew this valve you simply replace a cartridge that contains all the working parts. The valve body—a simple, sturdy housing—need never be removed from the line. Think of what this can mean to you in reduced down time and lower maintenance costs! Plan now to standardize on Hannifin Pilot-Master Valves.

- 2-way, 3-way and 4-way
- All sizes ¼" to 1¼"
- Pressures from 15 to 150 P.S.I.

WRITE FOR BULLETIN NO. 231

HANNIFIN
Hannifin Corporation, 527 S. Wolf Road, Des Plaines, Illinois
AIR AND HYDRAULIC CYLINDERS • PRESSES • AIR CONTROL VALVES

▲ For more details circle NED-1000 F5 on enclosed inquiry slip ▲

Investigate JOHNSON POWDERED IRON BEARINGS AND PARTS

Low cost, no machining and ferrous properties make Johnson powdered iron parts important for many applications. Johnson has just added this line to its well-known Ledaloyl (powdered bronze) products. Our engineers will gladly consult with you on the application of Johnson powdered iron. Write for information.

JOHNSON BRONZE CO.
580 S. Mill St., New Castle, Pa.

JOHNSON BEARINGS
Sleeve-Type

▲ For more details circle NED-1001 F5 on enclosed inquiry slip ▲

VULCAN
ELECTRIC HEATING UNITS

Strip Heaters

For Heating
Flat Surfaces • Shallow Pans
Hot Plates • Ovens • Platens
Dies • Plastic Extruders • Melting
Pots • Tanks • Package Sealers, etc.

RUGGED CONSTRUCTION

Rust-resisting sheath is of one-piece rectangular tubing, specially drawn to our specifications.

Heater coil, of nickel chromium wire, is insulated from the inner sheath wall with a refractory selected for best Terminal conduction and stability at elevated temperatures. Terminal screws are stainless steel, to ensure strength and avoid oxidation.

115 and 230 volts. Five terminal arrangements

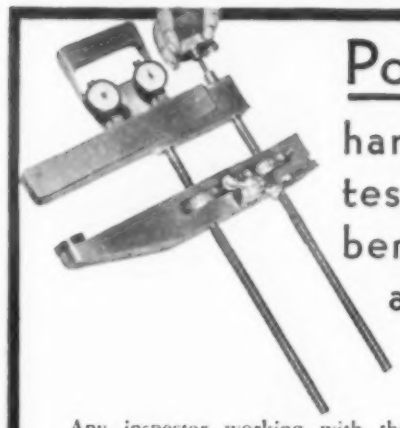
Steel sheath (150 to 1250 watts) for temperatures up to 750° F max. High temperature sheath (250 to 1500 watts) for temperatures up to 1200° F max.

VULCAN ELECTRIC COMPANY
DANVERS 8, MASS.

By the makers of Vulcan Electric Heating Units, Soldering Tools, Solder Pots, Glue Pots, Branding Irons and Electric Heating Devices.

See 8 page Vulcan Catalog in Sweet's Product Design File for 1955

▲ For more details circle NED-1002 F5 on enclosed inquiry slip ▲



Portable hardness tester with bench model accuracy

Any inspector working with the Riehle Portable Hardness Tester can obtain the same Rockwell readings as with a bench-type model. In fact, one manufacturer of jet engine components checks hardness of every piece with Riehle portables *only*. Tests *must* be accurate or components could fail under operating conditions. Riehle portables weigh but a few pounds . . . accurately test inside and outside surfaces of parts inaccessible or otherwise difficult to test. • Rockwell scales: A, B, C, D, F and G. For specimens up to 12" diameter or thickness.

FREE BULLETIN — WRITE DEPT. NED-655

Riehle TESTING MACHINES
A DIVISION OF
American Machine and Metals, Inc.
EAST MOLINE, ILL.

For more details circle NED-1003 F5 on enclosed inquiry slip

NOW TROUBLE-FREE deburring & countersinking with the NEW FORD UNIFLUTE COUNTERSINK

Engineered for maximum efficiency with simple *single flute design*, FORD'S new high speed steel Uniflute *ends all deburring and countersinking troubles* on soft stringy steels, aluminum, brass, bronze, plastic, rubber, wood and other materials. FORD'S new HSS Uniflute covers *a wide range of hole sizes with one diameter tool*. Its cutting action is effective from the working point to the major diameter. Job-engineered shear angles allow superior free cutting, insure trouble-free action, even at higher speeds.

FORD regrinding service adds tool life, reduces tool costs!

FREE information • **Bulletin HSS 408** gives complete information about Ford's new Uniflute countersink, plus easy 4-step instructions on how you can resharpen the Uniflute in your own tool room.

Catalogue No. 207 gives all facts on more than 277 FORD rotary tools including HSS ground cutters, rotary files, countersinks; CARBIDE cutters, end mills, grinding burs. **Send today!**

M. A. FORD MFG. CO., INC.
Pioneers in rotary tools for more than 30 years
721 W. River Street, Davenport, Iowa

For more details circle NED-1004 F5 on enclosed inquiry slip

NEW JOHNSON MODEL "M" "MOBILE" BAND SAW

Capacity—5" rounds, 10" flats

A Band Saw with PORTABILITY-PLUS . . . It's a natural for contractors of all kinds, or manufacturers, where it is advantageous to wheel the saw to the cutting job. It rolls easily over floors or even rough ground. Eliminates slow, laborious hand cutting of structural steel, pipes, conduits, angle iron, re-inforcing rods, etc. Carries its own extra blade supply. Modernize your facilities with one or more of these revolutionary machines now.

SEND FOR CATALOG AND NAME OF LOCAL DEALER

JOHNSON MANUFACTURING CORP.
BARNES and TAYLOR STS. ALBION, MICHIGAN

For more details circle NED-1005 F5 on enclosed inquiry slip

New Literature & Catalogs

Brass Rod Mill Products

Titan Metal Mfg. Co.—Weight tables, specifications and other technical data for Titan brass rod mill products are found in 20-page pocket-size booklet "For Your Metal Money's Worth." Covered are free-cutting brass, commercial bronze, Ti-nic-o-sil, Tombasil, forging rods and shapes, brass wire and Tru Shaft boat shafting.

For more details circle NED-1006 F5 on enclosed inquiry slip

Precision Bearings

McGill Mfg. Co.—140-page catalog contains information on complete line of bearings, as well as general data about engineering and production methods at this company. More than 30 pages of engineering information for ball and roller bearings, including charts, drawings and formulas for bearing load computation, are provided. Sections are devoted to Multirol and Guiderol bearings as well.

For more details circle NED-1007 F5 on enclosed inquiry slip

Glass-Enclosed Magnetic Switch

Revere Corp. of America—Operation, performance and characteristics of the Glaswitch, a sensitive magnetically operated, glass-enclosed switch for general industrial applications, is subject of 20-page illustrated engineering bulletin 1057. Switch is 2½ in. long and operates in any position in 1 millisecond or less at rates as high as 400 cps. Specifications and other data are presented.

For more details circle NED-1008 F5 on enclosed inquiry slip

Power Transmission Equipment

W. A. Jones Foundry & Machine Co.—First issue of bimonthly publication "Better Drives" deals with drives for heavy duty belt conveyors. Succeeding issues will cover drives of other types, their advantages and how they are applied.

For more details circle NED-1009 F5 on enclosed inquiry slip

VPI Corrosion Prevention

Angier Corp.—All phases of VPI corrosion prevention and its applications are discussed in 12-page manual "The Proven Method of Rust Prevention." Vapor phase inhibitor papers are covered and chemical action that halts corrosion of metal parts wrapped in them is explained. Twenty questions relative to VPI-paper are answered.

For more details circle NED-1010 F5 on enclosed inquiry slip

Rack & Scaffolding Construction

Structo System, Inc.—The Structo system of building storage racks, scaffolding, work benches, machinery stands, ramps, work platforms, section bins, portable racks and small buildings is described in 8-page form 30-340. Materials for system consist of drilled steel angles and standard ⅜-in. bolts. Socket wrench is only tool needed for assembly.

For more details circle NED-1011 F5 on enclosed inquiry slip

Adhesives for Transparent Film

National Adhesives—Pertinent information on "How to Handle Adhesives for Transparent Films" is provided in revised pocket-size booklet of this title. Booklet features new chart describing properties of all principal transparent films including Mylar, Cellophane, Pliofilm, polyethylene and cellulose acetate. Emulsion, lacquer, hot melt, solvent activator, and synthetic and natural resin adhesives are considered.

For more details circle NED-1012 F5 on enclosed inquiry slip

Rotary Blowers

Dexter Folder Co., Miehle-Dexter Supercharger Div.—Rotary blowers for all industrial products and processes, pressure or suction, are subject of 6-page bulletin No. 255. Used in moving air or gas, blowers have discharge pressures to 14 psi, vacuum to 15 in. of mercury and capacities ranging from 50 to 4000 cfm.

For more details circle NED-1013 F5 on enclosed inquiry slip

Laminated Plastic

Continental-Diamond Fibre Co.—Sheets, tubes, rods and fabricated specialties made of Dilecto laminated plastic are cataloged as to grade, application and properties in 20-page bulletin D-55. Trade name covers group of over 50 different fillers and resins combined by lamination and polymerization into a dense plastic. It has high compressive, tensile and flexural strength and rigidity, and can be machined same as metal.

For more details circle NED-1014 F5 on enclosed inquiry slip

A NEW FASTENER...A NEW TYPE OF FASTENER

DIE-CAST ROUND-HEAD THUMB NUTS & SCREWS with GRC's exclusive WIDE GRIP feature

Generous width assures firm, comfortable grip; rounded scalloped edges.

Mass produced in rust-proof zinc alloy at low cost, with eye appeal to help sell your product.

3 standard head diameters; all standard thread sizes; both open-end and closed-end thumb nuts; thumb screws with and without shoulders. Write today for samples, prices and bulletins . . . or ask for quote on special needs.

As in all other GRC quality fasteners—wing nuts, cap nuts, wing screws—threads are clean and accurate.

GRIES World's Foremost Producer of Small Die Castings

GRIES REPRODUCER CORP.
143 Beechwood Ave., New Rochelle, N. Y. • NEw Rochelle 3-8600

For more details circle NED-1015 F5 on enclosed inquiry slip

KOOLSHADE

HERE IS A NEW SOLUTION TO AN OLD LIGHTING PROBLEM..

With KOOLSHADES on your reflectors, you will find that instead of being hot enough to inflict painful and annoying burns, they are not even uncomfortably warm.

Fits deep drawn reflectors; may be trimmed to fit shallow reflectors without sacrificing the insulating efficiency.

An inexpensive and practical way to prevent injury and loss of time due to contact with hot light reflectors. Made of asbestos.

PRICE 90c each
F. O. B. Your Plant

KOOLSHADES to fit round, bowl-shaped reflectors will be available in about 12 weeks.

The H & H Products, Inc.
LOGANSPORT, INDIANA

For more details circle NED-1016 F5 on enclosed inquiry slip

GET MORE PRODUCTION FROM STEAM UNITS!

WITH NEW, FASTER-VENTING Super-Silvertop HEAT-KWIK STEAM TRAPS

• Unaffected by pressure variations and with 800% more air venting and greater condensate handling capacity, the new Super-Silvertop Heat-Kwiks enable you to increase production on dryers, kettles, autoclaves, unit heaters, etc.

For more information write to
The V. D. ANDERSON COMPANY
1958 West 96th St. • Cleveland 2, Ohio
Subsidiary of Chesapeake Industries, Inc.

Quality Steam Traps Since 1886

THE ENGINEERED STEAM TRAP

For more details circle NED-1017 F5 on enclosed inquiry slip

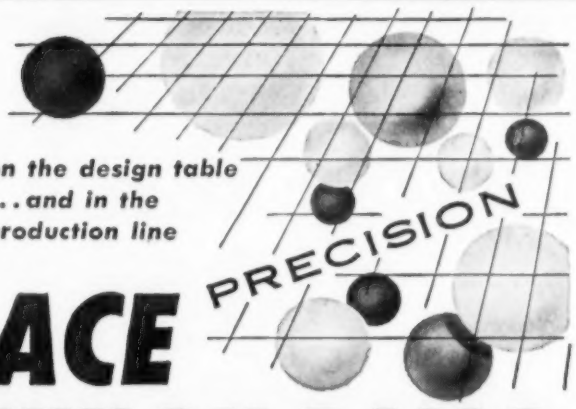
NYLON CABLE HANGER . . . high-strength clip resists temperature extremes, chemicals

Seventeen standard diameter sizes accommodate single cables or bundles from 3/16" to 2". Several sizes have two or three-hole tongues, to permit diameter adjustment in installation.

Combining the best features of metal clips with the advantages of nylon, Burndy molded nylon cable hangers weigh 70% less than metal cable clips of comparable size, yet have sustained loads of more than 300 lbs., in the larger sizes. Extremely flexible, these nylon cable hangers are preformed, for ease of installation, requiring no shaping or forming on the job and retaining their shape permanently. Resistant to sustained temperatures from −60°F to 250°F, these cable hangers are also unaffected by oils, gasoline, alcohol, or hydraulic fluid. An insulator itself, this type of cable hanger cannot cause grounds or short circuits and is free from hysteresis losses. Smooth, rounded-edge, non-abrasive surfaces facilitate installation and prevent injury to insulation.

For information on Burndy nylon cable hangers, write BURNDY ENGINEERING CO., INC., 500 Richards Ave., Norwalk, Connect. *Advt.*

▲ For more details circle **NED-1018 F5** on enclosed inquiry slip ▲



on the design table
. . . and in the
production line

PRECISION

ACE
NYLON BALLS

KEEP THINGS MOVING SMOOTHLY IN HUNDREDS OF INDUSTRIAL APPLICATIONS!

MASS-PRODUCED OF DuPONT NYLON FM No. 10001 TO CLOSE TOLERANCES OF ± .001. Sizes ⅛" to ¾"

Ace Nylon Balls have brought new design flexibility and production economy to many of America's largest manufacturers. Uniform, precision-fabricated, light-weight Ace Nylon Balls are tough at low temperatures, stable at high temperatures, and resistant to chemicals and abrasion. Ace Nylon Balls may add greater efficiency and economy to your products, too.

Write for samples, bulletin, price list today

WHY NOT LET OUR ENGINEERS ADVISE YOU?

Complete facilities for fabricating plastic parts for all industries. Estimates submitted promptly on receipt of blueprints or specifications

ACE PLASTIC COMPANY
Precision Plastic Fabricators and Extruders
ACE HIGH QUALITY
91-28 Van Wyck Expressway • Jamaica 35, N. Y.

▲ For more details circle **NED-1019 F5** on enclosed inquiry slip ▲

KEEPING IT *HOT* & *DRY*— IN A *COLD* PLACE

PROBLEM: To hold refrigerator's heater wire assembly securely in place, preventing condensation from forming on mullion.

SOLUTION: Heater wire is imbedded in PRESSTITE Permagum, which holds wire firmly and prevents heat leakage back into insulation area. Permagum won't get brittle at -40°F. or slump at 350°F.; has no contaminating odor.

What is YOUR Sealing-Design Problem? Over 400 Presstite-developed sealers are ready to help improve your product. Bring your sealing problem to us today.

PRESSTITE SEALING COMPOUNDS

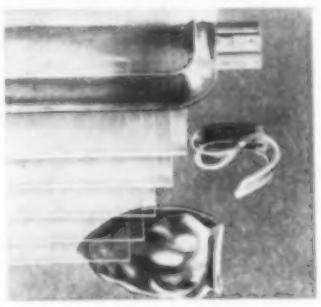
In Canada: Railway & Power Engineering Corp., Ltd.

PRESSTITE ENGINEERING COMPANY
3742 Chouteau Ave. St. Louis 10, Mo.

▲ For more details circle **NED-1020 F5** on enclosed inquiry slip ▲

New Processes & Materials

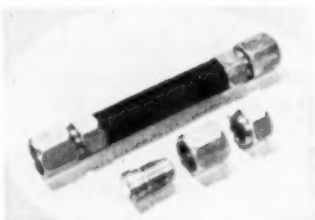
CLEAR THERMOPLASTIC easily formed, machined, fabricated



High resistance to abrasion and crazing and immunity to most corrosive chemicals are properties of thermoplastic Duralite, a clear plastic which can be formed, machined and fabricated. It withstands severe weather conditions and has flexural strength almost twice that of methacrylate, plus improved tensile and impact strength. Applications include formed instrument panels and dials and television and clock faces. It is available in 1/6, 3/32, 1/8, 3/16 and 1/4-in. thick sheets in sizes up to 40 x 50 in. Made by **Homalite Corp.**, 14 Brookside Dr., Wilmington 166, Del.

▲ For more details circle **NED-1021 F5** on enclosed inquiry slip ▲

FIBER BRAID HOSE for 175 to 375 psi service



Added to line of hose fittings is this rubber covered, single fiber braid (nonmetallic) hose and appropriate brass reusable fittings. Hose incorporates high-tenacity rayon ply and can be used in service with hydraulic fluids, water, crude and fuel oils, hot oil, diesel fuels, gasoline and air in pressure range from 175 to 375 psi. Fittings, offered for ¼, ⅜, ½ and ⅝-in. ID hose, make skiving unnecessary. Body types available are 45-degree flare end, 45-degree flare swivel nut and male pipe thread. Offered by **Parker Appliance Co.**, Tube & Hose Fitting Div., Dept. NE, 17325 Euclid Ave., Cleveland 12, O.

▲ For more details circle **NED-1022 F5** on enclosed inquiry slip ▲

INSTRUMENT HARNESS consists of 10 plastic covered tubes

Composed of ten individual copper or aluminum tubes in a perforated plastic covering, Dekoron M Ribbon chemically resistant tubing harness is easily installed and available in 500-ft lengths. One or more individual tubes can be stripped from the ribbon without tools and without destroying the protective coating, which is 0.020-in. thick virgin elastomeric black polyvinyl chloride. Each tube measures ¼-in. OD with 0.030-in. wall copper or 0.032-in. wall aluminum, or ⅜-in. OD with 0.032-in. wall copper or 0.035-in. wall aluminum. Overall widths are 4⅛ and 5⅛-in. Made by **Samuel Moore & Co.**, Dekoron Products Div., 1000 South St., Mantua, O.

▲ For more details circle **NED-1023 F5** on enclosed inquiry slip ▲

PRESSURE-SENSITIVE TAPE high tensile, dielectric strengths

Good bonding ability at temperatures from −100 to 550° F is combined with high tensile and dielectric strengths in No. 7000-G Mystik pressure-sensitive

tape. It has a Fiberglas backing and inorganic silicone adhesive; and is stable in the presence of sulphuric, hydrochloric, acetic and nitric acids; lubricating oils; ammonia; chlorine; bromine and iodine. Tape will not corrode or stain any of a wide variety of metals, fabrics, papers or glass. It qualifies as Class H insulation. Made by **Mystik Adhesive Products**, 2657 N. Kildare Ave., Chicago 39, Ill.

▲ For more details circle **NED-1024 F5** on enclosed inquiry slip ▲

The OFFICE VALET LOCKERETTE

—Combines the best features of both lockers and coat racks

Wraps are exposed to air and light. Employees do not face the weather in damp wraps that have been crumpled in dark lockers—do not eat soggy lunches, soaked by wet hats or gloves. Each person has his own spaced coat hanger, ventilated hat shelf and 12" x 12" x 15" deep lock box for lunches, tools and personal effects.

Lockerettes save space too . . . the No. 6-12 (2-column) accommodates 12 people in 6 feet; the No. 9-18 (illustrated) accommodates 18 in 9 feet.

Improves health and morale—lower absenteeism.

WRITE FOR BULLETIN OL-8

VOGEL-PETERSON CO.
1121 West 37th St. • Chicago 9, Ill.

▲ For more details circle **NED-1025 F5** on enclosed inquiry slip ▲

Resonant Reed Design Simplifies Transmission of a Number of Control Signals Over a Single Circuit

Each carbon-steel or alloy reed is tuned to vibrate to a signal frequency within a narrow range. Several Frahm® Resonant Reed Relays may be operated simultaneously on a single control circuit by employing an equal number of source generators designed so that no operating frequencies overlap. In the 200-500 cycle range 16 channels can be used on one circuit without interference. Frahm Relays may be used with all types of communication circuits including radio and carrier systems as well as wire circuits. Correspondence invited. Also available: **Frahm Oscillator Controls Bulletin 34-D.**

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

▲ For more details circle **NED-1026 F5** on enclosed inquiry slip ▲

Here's **FREE** help in solving thousands of difficult **PRODUCTION & INSPECTION PROBLEMS**

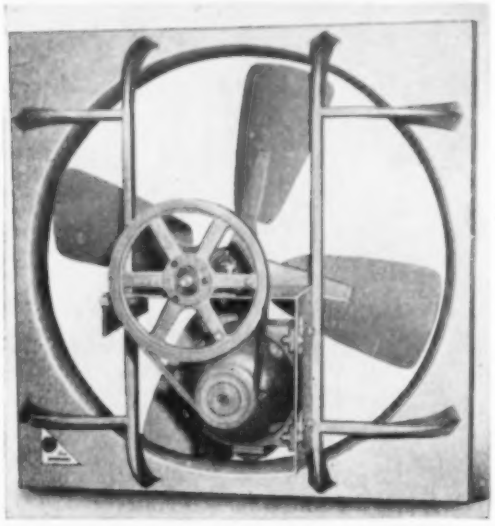
24 pages packed with guidance on the selection and specific on-the-job applications of all types of Industrial Magnifiers.

This practical booklet answers all your questions: "Just what is a magnifier?", "Why so many different KINDS of magnifiers?", "What is meant by a 'corrected' lens?" It also discusses correct working distances, magnification and field of view, magnifiers as precision instruments, and how to hold a magnifier. All this—PLUS condensed catalog listings giving specifications and suggested uses of available types of magnifiers which will cut rejects, save money and speed production!

Send for your FREE copy today! Bausch & Lomb Optical Co., 51642 Bausch St., Rochester 2, N. Y.

BAUSCH & LOMB
Industrial Magnifiers

▲ For more details circle **NED-1027 F5** on enclosed inquiry slip ▲



"Buffalo" Design 53 Package Propeller Fan

PLANT VENTILATION COSTS LESS

—when you install these ready-to-run "Buffalo" Package Propeller Fans! Just mount them in windows, wall openings. Sizes 8" (500 cfm) to 144" (250,000 cfm). Certified PFMA Ratings, a range that now brings you big-fan ventilation at propeller fan cost. *Efficient*—one multiple installation delivering 1,439,000 cfm on only 66 total H.P.!
WRITE TODAY FOR BULLETIN FM-1234.

"Buffalo" **BUFFALO FORGE COMPANY**
215 Mortimer St. Buffalo, N. Y.

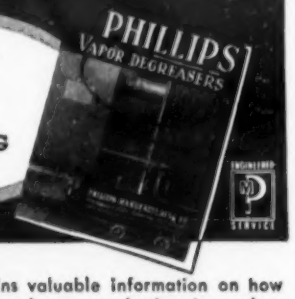
PUBLISHERS OF "FAN ENGINEERING" HANDBOOK
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities
INDUSTRIAL EXHAUSTERS • BELTED VENT SETS
PROPELLER FANS • "E" BLOWERS-EXHAUSTERS

For more details circle **NED-1028 F5** on enclosed inquiry slip

PHILLIPS

LEARN HOW VAPOR DEGREASING CAN CUT COSTS AND INCREASE YOUR PRODUCTION

SEND FOR YOUR FREE COPY OF PHILLIPS' NEW DEGREASING BULLETIN



HERE's a new bulletin that contains valuable information on how modern vapor degreasing speeds up production in modern factories by making metal cleaning operations faster and more economical. Listed below are some of the features of this new book:

WHAT DEGREASING IS — A full description of what vapor degreasing is and what it will accomplish for you.

HOW DEGREASERS WORK — A series of photographs and written description shows what happens in the degreasing process.

DEGREASER APPLICATIONS — Illustrates number of different applications of degreasers to solve metal cleaning problems in various industries.

COMPLETE LINE OF STANDARD DEGREASERS — Describes Phillips' full line of standard equipment, including batch type, combination, rotomatic, and conveyorized models.

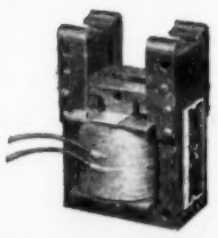
SPECIALLY ENGINEERED UNITS — Tells about Phillips' service in designing special degreasing units for solving unique metal cleaning problems.

Phillips 3463 Touhy Avenue • Chicago 45, Illinois
MANUFACTURING COMPANY
In Canada: Mfd. by Williams Tool Corp., Brantford, Ontario

For more details circle **NED-1029 F5** on enclosed inquiry slip

SOLENOIDS

G-211 solenoid, 10 lbs. at 85% voltage, 1½" stroke.



NA-726 solenoid; 16 lbs. at 1" stroke, 100% voltage.

G-200 line of solenoids, replacement for General Electric solenoids: G-206 to G-213 both inclusive, push and pull.

NA-700 line of solenoids, replacement for National Acme solenoids, size for size, for all modifications.

The solenoids of both the above replacement lines are all thoroughbred Trombetta solenoids. All dimensions of interest to the user are the same as the respective solenoids they replace. The pull and pull characteristics are identical. In either case, we are in a position to furnish replacement units for any and all modifications. They are available for all voltages and frequencies, including direct current.

See our catalogs in Sweet's Catalog Service. Ask for more information.

TROMBETTA SOLENOID CORP.
329 N. MILWAUKEE STREET • MILWAUKEE 2, WISCONSIN

For more details circle **NED-1030 F5** on enclosed inquiry slip

New Literature & Catalogs

Screw Machine Products

National Screw Machine Products Association—Available to those interested in designing and specifying screw machine products, the 1955 Buyer's Guide covers such subjects as what increases costs, design considerations, samples, drawings, grinding, burring, concentricity, plating and heat treating, finishing, inspection, overruns and underruns.

For more details circle **NED-1031 F5** on enclosed inquiry slip

Grating, Stair Treads & Decking

Klemp Metal Grating Corp.—General data and specifications on all types of grating, open steel floor armor, stair treads, vessel liners, bridge decking and drain grates are contained in 16-page illustrated manual. It includes safe-load tables for all basic grating types, panel width constant charts, tables of widths and types of steel stair treads, anchors and other information.

For more details circle **NED-1032 F5** on enclosed inquiry slip

Tooling Facilities

City Tool & Die Co.—Transfer dies, lamination dies, jigs, fixtures and miscellaneous special cutting tools are products designed, engineered and built by this company. It can also tool complicated special automatic machine tools. Personnel and facilities are described and illustrated in 8-page brochure.

For more details circle **NED-1033 F5** on enclosed inquiry slip

Mechanical Aplications of Felt

Felters Co.—Hundreds of uses of felt, particularly mechanical applications, are described in 20-page technical brochure entitled "Design Book." Felt, which can be impregnated with variety of products, is available in thicknesses of 1/32 to 3 in. and densities ranging from 3 oz to 60 lb per sq yd. Frictional, cushioning, filtering, insulating, sealing, spacing and wicking uses are discussed.

For more details circle **NED-1034 F5** on enclosed inquiry slip

Bulk Materials Conveyors

Jervis B. Webb Co.—Bulk conveyors for handling coal, ashes, sand, gravel, stone, chips, aggregate and logs are subject of 12 page well-illustrated bulletin 455. Wide range of industrial installations is pictured; and head and tail ends, cross sections, drive and take-up units are diagrammed.

For more details circle **NED-1035 F5** on enclosed inquiry slip

Automatic Mask Washing Machines

Conforming Matrix Corp.—In removing accumulated paint from masks, automatic mask washing machines described in 4-page folder 600 allow time and labor savings of 35 to 50 per cent over that required by manual cleaning, soaking and brushing. Dangers of solvent-washing open tanks and pans are eliminated.

For more details circle **NED-1036 F5** on enclosed inquiry slip

Automated Production Machines

Ex-Cell-O Corp.—"Opportunities Through Automation" is 20-page brochure which illustrates typical examples of standard, transfer and special drilling and boring machines equipped for automatic loading and unloading of workpieces. Brochure stresses the point that automation need not be restricted to very large plants.

For more details circle **NED-1037 F5** on enclosed inquiry slip

Vulcanized Fiber & Laminated Plastics

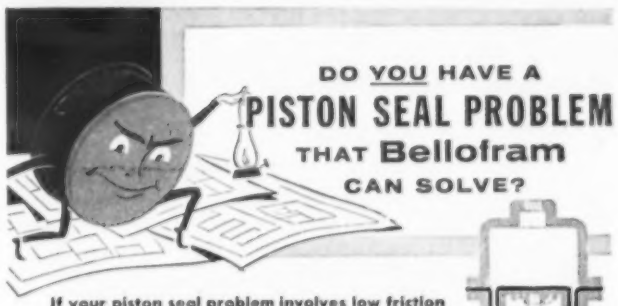
National Vulcanized Fibre Co.—Vulcanized fiber and phenolite laminated plastic engineering materials for modern industry are descriptively covered in 16-page bulletin 3793. Sheet, tube and rod forms of these products are considered and their general properties are charted. Typical uses include transformer coils, circuit breakers, gear blanks, abrasive disk backings, sample cases and printed circuits.

For more details circle **NED-1038 F5** on enclosed inquiry slip

Precision Tools & Tape Rules

Lufkin Rule Co.—Precision Tool catalog No. 8 and Tape and Rule catalog No. 104, both with 160 pages, comprise available literature. Former is handbook and buyer's guide for the toolmaker and machinist, while latter covers steel, engineers, oil gaging, surveying and chain tapes; woven tapes; tape rules; spring joint rules; and lumber rules. Special section on rules, gages and squares is provided. Also available is General Catalog No. 14 which combines information in the first two.

For more details circle **NED-1039 F5** on enclosed inquiry slip



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Bellofram® CORPORATION
149 MOODY ST., WALTHAM 54, MASS.

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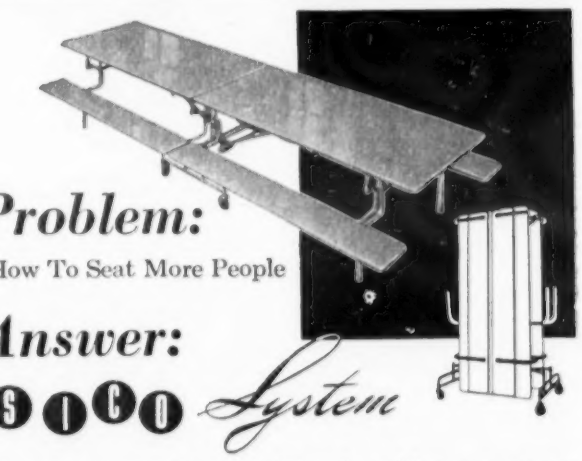

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Bulletin #42— Technical data on products and service.
Bulletin #43— Application data and type selector guide.
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Price lists.

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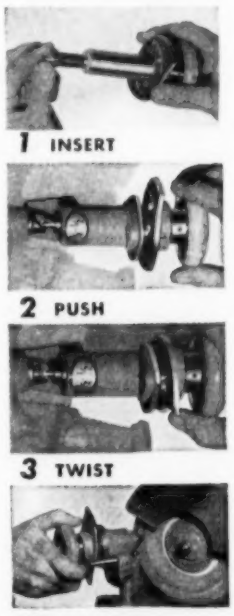
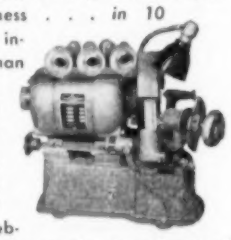
NOW PRECISION DRILL GRINDING
BY ANY INEXPERIENCED WORKER!



The BLACK DIAMOND Drill Grinder restores a worn drill to like-new precision sharpness . . . *in 10 seconds!* Any inexperienced man (or woman!) is an expert grinder with this unit. Both lips ground at once . . . web-thinning equally simple! Pays for itself many times over!



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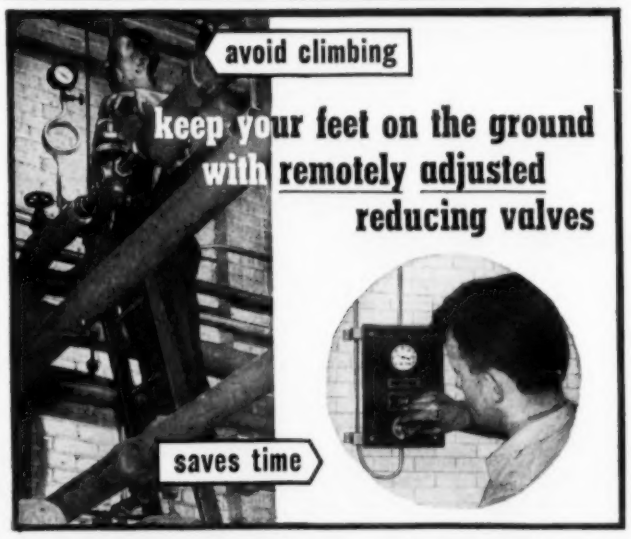

Control those inaccessible Pressure Reducing Valves from any location you wish!

A LESLIE Air Loading Panel, Type ARP-1 and remotely adjusted reducing valve eliminates dangerous ladders, wasted time and costly overheating.

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LESLIE

AIR LOADING PANELS

2986

LESLIE CO., 227 Grant Avenue, Lyndhurst, New Jersey

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Various bulk materials can be transported over long distances and up steep grades by conveyor belt reinforced with Super Raynile synthetic fiber. Belt is said to be 400 per cent stronger than conventional cotton reinforced belt, yet is pliable and flexible. Splicing can be done in the field quickly and economically without special equipment. Widths range up to 72 in. and thicknesses, up to 15 plies. Made by **Hewitt-Robins Inc.,** Dept. P, 666 Glenbrook Rd., Stamford, Conn.

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CHEMICAL-RESISTANT PLASTISOL provides coating for metal parts

Supplied as a free-flowing liquid, chemical-resistant plastisol 16-093 is converted by heat into a flexible, rubberlike coating for application to metal parts. Coating can vary from 1/32 to ½-in. and is smooth, dense, tough and abrasion-resistant. It is formulated for cold or hot dip techniques, but can be modified on request for spraying or roller coating methods. Compound is practical for racks, tote baskets, tank linings, valve parts and other metallic surfaces which must resist oils, greases, acids, alkalies, salts of organic acids and petroleum solvents. Black is standard color; other colors are supplied on request. When properly cured, coating has 1800 psi tensile strength. Developed by **Watson-Standard Co.,** 219 Galveston Ave., Pittsburgh 12, Pa.

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CUSHIONED BAGS protect against rust and corrosion

Metal parts can be safeguarded from rust and corrosion for periods up to 10 years when packaged in VCI-lined cushioned bags. Loop stitching on each side adds to durability and forms an outside lip that acts as a buffer against shock. Cushioning is sealed within double walls of moisture resistant kraft. VCI lining blankets ferrous metal and aluminum products with an invisible dry vapor that penetrates blind holes and cavities. Parts are ready for immediate use when removed. Bags are easily stamped or otherwise identified and can be filled by automatic and semiautomatic filling machines. Sample kit of eight sizes will be sent free upon request to the manufacturer, **Jet-Pak, Inc.,** Dept. NED, 859 Summer Ave., Newark 4, N. J.

▲ For more details circle **NED-1048 F5** on enclosed inquiry slip ▲

OIL & GREASE ABSORBENT for floors, prevents slipping

Maximum protection against slipping accidents and fire hazards is provided by Hi-Dri oil and grease absorbent for all types of floors. Compound also absorbs solvents, water solutions, acids, paints, resins, syrups, chemicals, waxes, inks and similar fluids. It will not readily pulverize, break down or cake under heavy traffic, nor turn muddy under wet conditions. Harmless to handle and nonabrasive, Hi-Dri is also completely fireproof. Physically, absorbent is granular, sanitary, mineral compound that draws liquids completely within itself, leaving no slick on the floor. It is left on floor for a day or more until saturation point is reached, then is easily swept up with a broom. Made by **Waverly Petroleum Products Co.,** Dept. NED, 1724 Chestnut St., Philadelphia 3, Pa.

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Manufacturers of a Complete Line of Building Maintenance Materials
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for all filtering and straining applications.
All meshes, all weaves, all alloys.

Send Specifications for an estimate.
Department 11.

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MANUFACTURING CORP. SOUTHPORT, CONN.

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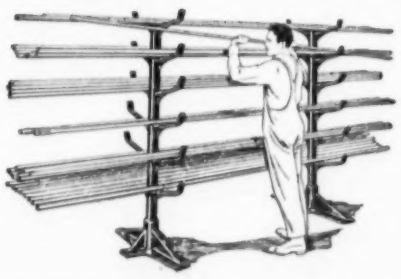

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BROWN QUICK-SERVE RACKS

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Brightboy's *abrasive and rubber, working together,* give you a wider concept of *time savings and finishing effects than you have ever associated with abrasives!* There are STOCK Brightboy rubber-and-abrasive grades and textures particularly "matched" for your jobs.

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ASK YOUR DEALER FOR THIS NEW CATALOG which tells you: What Brightboy Is; What It Does; The Grains and Textures for your Jobs; The Machine Speeds Best Suited.

If your dealer cannot supply you, write us. Send us specifications on jobs when you have burring, finishing, cleaning and polishing problems or on which you would like to cut time costs.

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WELDON ROBERTS RUBBER CO.
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WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

America's Pioneer Manufacturer of Rubber-Bonded Abrasives.

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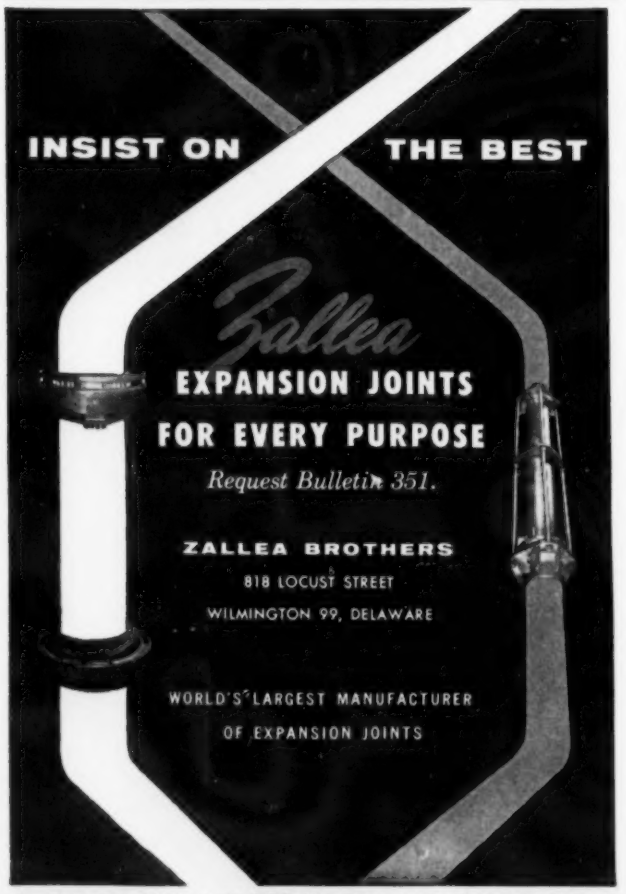

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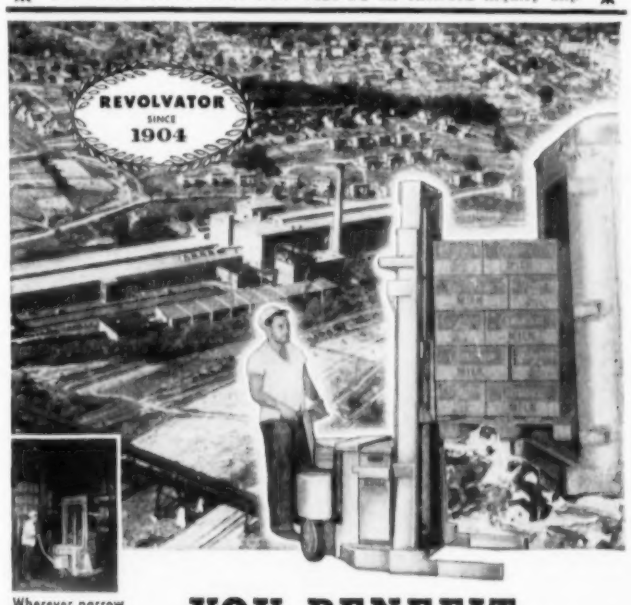

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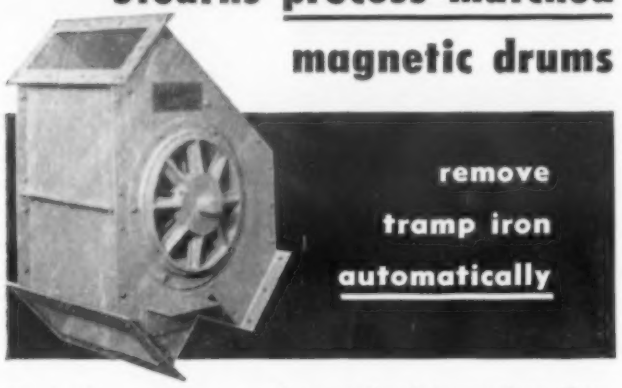

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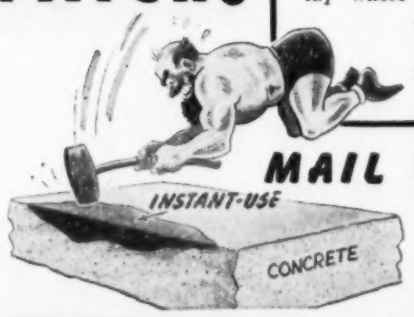

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